



BEYOND THE GOLDEN GATE

A MARITIME HISTORY OF CALIFORNIA



HISTORIC RESOURCES STUDY

THE SAN FRANCISCO MARITIME
NATIONAL HISTORICAL PARK

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THE ORGANIZATION OF AMERICAN HISTORIANS



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Cover Image: Balclutha, now the flagship of the San Francisco Maritime National Historical Park, was once part of a tremendous grain fleet that served the West Coast of North America. At the height of the grain trade, 559 vessels participated in one year. Here she is on one of her many trips around Cape Horn. Courtesy San Francisco Maritime National Historical Park. A6.35795pl, n.

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PREFACE

On June 27, 2013, the San Francisco Maritime National Historical Park (SAFR) will celebrate its twenty-fifth anniversary.¹ To commemorate the event, the National Park Service (NPS)—in partnership with the Organization of American Historians—has commissioned this historic resource study (HRS) to outline the past, present, and future of SAFR using its housed collections, resources, and catalog. The HRS is a “historical overview of the Park’s maritime subject matter . . . relating park resources to their broad historical contexts, to other maritime sites and structures in the Bay Area, . . . while outlining the place of the Park and its resources in the ongoing effort to study, preserve, and interpret West Coast maritime history.” Based on primary and secondary research, this project provides an informed framework for maritime history preservation and development along the entire West Coast, with SAFR as the nexus, and synthesizes this information into a comprehensive, historical narrative of the maritime events and activities that have occurred within the San Francisco Bay watershed. This study adds to our current understanding of the role that San Francisco played in America’s maritime history and elucidates the role of maritime affairs in city’s history. After all, the connections between San Francisco and the sea run long and deep, and provide many opportunities for serious scholarly investigation.

Although the study places the story of Bay Area maritime history within the larger context of the maritime history of the Pacific Coast and the nation, it focuses primarily on the role of the Bay Area as the nexus for West Coast shipping and commerce from the mid-nineteenth through the mid-twentieth centuries. While the park’s mandate extends to the maritime history of the whole of the United States (with a particular emphasis on the Pacific Coast), this study focuses on the West Coast, particularly the San Francisco Bay region because, in general, San Francisco was the hub of West Coast maritime affairs from the late 1840s into the 1950s. However, the HRS must—by necessity—consider the larger patterns of trade and commerce encompassing the whole of the coast, the nation, and even the Pacific Basin. In so doing, this study should not merely be considered “an evaluation and assessment of current or future resources,” but should also be seen as a reflection of the breadth and depth of the park’s holdings while serving as a prism through which the NPS and SAFR might better achieve its mission, defined in the enabling legislation of June 27, 1988, to “preserve and interpret the history and achievements of seafaring Americans and of the Nation’s maritime heritage, especially on the Pacific coast.”²

The San Francisco Maritime National Historical Park is one of the more challenging sites about which to write an HRS. First, it is unusual as a national park in that its mandate does not relate to its physical location or to particular events or individuals associated with it. Rather than being organized around a single person, incident, or region, as are most other national historical parks, SAFR is organized around a broadly defined subject area with a central theme: the role that maritime San Francisco played in the development of the West Coast, in particular, and of the United States, in general. Additionally, the park

1 The San Francisco Maritime National Historical Park was established as an independent NPS entity in 1989, having previously been a part of the Golden Gate National Recreation Area.

2 The enabling legislation states: “In order to preserve and interpret the history and achievements of seafaring Americans and of the Nation’s maritime heritage, especially on the Pacific coast, there is hereby established the San Francisco Maritime National Historical Park” (Public Law 100-348, June 27, 1988).

contains some of the most diverse resources found within any NPS unit, including the buildings and grounds of the Aquatic Park National Historic Landmark (NHL) District, seven historic vessels (six of which are NHLs), a collection of museum objects relating to West Coast maritime history, an archive of original documentary material, a library of published materials, and a brick warehouse building, now leased as the Argonaut Hotel, which contains a visitor's center. In general, the park's collections, including its major vessels, have been selected because of their relevance to the maritime history of the West Coast, particularly San Francisco. The diversity of these resources—each of which can be analyzed, appreciated, and interpreted in many ways—adds a level of complexity to this project, but also underscores the need for a historic resource study. Owing to this complexity, a variety of methodologies and approaches were utilized to create an HRS that is both broad and deep.

In order to preserve the research findings and write a history that is detailed and thorough yet readable, this study connects the maritime history of the greater Bay Area to the collections and resources of the San Francisco Maritime National Historical Park. Here, I analyze not only events but also individuals that distinguish the history of maritime San Francisco. The study situates the region and its actors into larger historical and geopolitical contexts, focusing on the prominent role of global trade (lumber, sugar, grain, oil, gold, and so on) and resource acquisition (for example, pelts, whales, fish). The story is told in relation to the park and what it stands for, focusing on the major themes the collection represents and the ways in which these have developed and been refined over time.

The finished product, then, represents a synthesis of information, making sense of a story that has yet to be presented cohesively. Offered here is a clear and concise narrative that offers a wide-angle view of maritime history along the Pacific Coast, thus allowing for greater ease of interpretation while providing a level of information and analysis that traces the trajectory of themes that have been the traditional focal points of the collection. In addition to serving as a baseline narrative for SAFR staff and visitors alike of the park's important themes, places, and times, the HSR will simultaneously guide park management in considering the important themes to focus on in terms of collections acquisitions, analysis, and interpretation.

INTRODUCTION:

FROM PREHISTORY TO POSTCONTAINERIZATION

This volume is intended as a primer on the maritime history of California and represents the first systematic investigation into that region's long relationship with the sea. Drawing on both primary and secondary materials, it is presented as a work of synthesis so others interested in the broad subject of California's maritime history can further their own interests while adding to their knowledge of this fascinating topic. It is, therefore, as much the culmination of many years work as it is the commencement of other projects. My hope is that the information presented here will spur increased interest in, and scholarship about, the maritime history of California.

California's relationship with the sea is long and rich; indeed, one could make the case that the history of California is preeminently maritime. From its first inhabitants to its current tourism, the rivers, lakes, and oceans of the Golden State have assumed a central role in California's history. Even the great seal of the State of California offers a maritime perspective. The foreground features the goddess Minerva, sprung full-grown from the brain of Jupiter. A brown bear, feeding on a cluster of grapes, watches a miner ply his trade before a depiction of the Sierra Nevada range, attesting to both the natural beauty of the state and the gold rush that gives the state its motto, "Eureka" ("I have found it"). Most telling, however, are the half dozen or so ships that occupy much of the center of the image: one knows not what they are named, where they are headed, or the business in which they are engaged. Still, the intent of the artist is clear: California is built upon a connection to the sea, and this connection is as important to the state as agriculture, mining, or other activities. This volume mirrors that intent.

Maritime history is itself a peculiar field of study. Long seen as the purview of amateurs, it has only recently been embraced by professional scholars, who have focused primarily on the East Coast. The few works that address the maritime history of the Great Lakes, Gulf Coast, and Pacific have tended to be superficial accounts of one's experiences, or highly detailed economic treatises that draw little connection to larger, transcendent themes. Through the lens of Pacific maritime history, this book attempts to redress some of these shortcomings and propose new avenues for investigation in all realms of maritime scholarship.¹ I hope this volume—with its synergistic look at geography, exploration, seaborne commerce, warfare, recreation, and countless other areas of investigation—will serve as a touchstone for further study.

1 Among the few works that look at maritime California in a holistic fashion is a self-published volume by an avocational writer. Martin Riegel, *California's Maritime Heritage* (San Clemente, CA: Riegel Publishers, 1987).

CHAPTER 1

THE NATURAL SETTING

Today, the maritime aspects of California are inescapable. From advertisements and popular images that trumpet the long, uninterrupted beaches of Southern California to the economic impact of shipping in the San Francisco Bay area, few matters of life in California are untouched by access to the Pacific. However, recreational, martial, and other manifestations of maritime usage present a dichotomy that confounds contemporary observers as much as it did past ones.¹ The waters belonging to and beyond the golden shores of California simultaneously represent opportunity and challenge, prosperity and danger.

Seaborne commerce, for example, carries American goods to the seemingly inexhaustible markets of Asia, while bringing immigrants—and nonnative species—to the self-proclaimed land of opportunity. Additionally, fishing and recreational pursuits remain prominent activities in California waters, as they do across the Pacific, but come with environmental and ecological costs. Moreover, the bustling navy town of San Diego allows the United States to project its power and influence across the world, while serving as one of the engines of what is the world's fifth-largest economy. Even the interior of the state, often depicted as farming mecca, mountainous retreat, or desert wasteland, is clearly affected by access to navigable, potable, and life-giving water. From the wellsprings of the Sacramento River to the bounty of Lake Tahoe, the rich agricultural and recreational aspects of modern California depend upon water. As one axiom states, “where water flows life follows.” Indeed, when NASA scientists and other prognosticators look for signs of life outside Earth, they use the presence of water to make their determination. Even today, modern Californians avoid the parched interior region of their state, save for those intrepid souls willing to cross Death Valley en route to Las Vegas or another manmade oasis. Ironically, the arid regions of California's southern interior—including Death Valley—were once part of a great sea, as evidenced by the salt, borax, gypsum, and soda deposits still harvested there today, and by the numerous marine fossils embedded in the rocks.

This apparent acknowledgment of the maritime heritage of California was not always the case. Geographically speaking, California is not as blessed as other locales when it comes to maritime affairs, which is somewhat surprising given the provenance of the Golden State. The name *California* itself was probably derived from a popular Spanish novel, first published in 1510, in which a fictional paradise was first described. Garci Ordóñez de Montalvo's *Las Sergas de Esplandián* (*The Deeds of Esplandian*) describes California as “an island on the right hand side of the Indies . . . abounding in gold and precious stones. . . . it is a notoriously extraordinary place . . . its history has been largely influenced by its geography: its extreme isolation, its extraordinary climate.”² A party of Spanish conquistadores, crossing the Sea of Cortés from Mexico in 1533, mistakenly believed that the peninsula on which they landed was an island, and honored this territory with the name California. Not long after the expedition, numerous maps were developed by American, Asian, and European cartographers that depicted the

1 See Philip Steinberg, *The Social Construction of the Oceans* (Cambridge: Cambridge University Press, 2001).

2 Quoted in Kevin Starr, *California: A History* (New York: Random House, 2005), 10.

region as an island, separate from the mainland. In time, the name California was designated to the whole of the region, although the initial peninsula, which was termed Baja California, was differentiated from its northern neighbor, Alta California.³ While one would expect the idyllic representation of the region as one graced by ready access to water to translate into a ready ability to conduct maritime business, this was not the case.

Those long, uninterrupted beaches so popular with surfers, tourists, and sun worshipers do not make for easy (or profitable) maritime activity. Neither do the rocky points and jagged cliffs of the Northern California coast. Compared to the Atlantic Seaboard and Gulf Coast, California is at a distinct disadvantage when it comes to deepwater ports and safe harbors; moreover, its rugged, hilly terrain provides little refuge where ships of any appreciable size could take cover in a storm. Indeed, along the entire 1,264-mile coastline—comprising half of the coastline of the western continental United States and nearly one-tenth of all the Lower 48—that stretches from Mexico to the Oregon border, there are but a handful of natural harbors: San Diego, Monterey, San Francisco Bay, and Humboldt Bay are among the few notable havens found between latitudes 32° and 42° north, the geographical confines of the state.

It should be noted that these features are not unique to California, and similar statements apply to other parts of the American Pacific coast. For example, some geographers claim that north of San Francisco Bay for nearly a thousand miles there is “hardly a cover to protect vessels” of any size. If we included Oregon and Washington in this study, only Coos Bay, the Columbia River, Grays Harbor, and Puget Sound could be added to the list of suitable ports along the corridor from Mexico to British Columbia.⁴ This rather finite list does little to inspire confidence in any but the most intrepid of sailors. The manmade port of Los Angeles/Long Beach—one of the busiest in the world today—serves as a testament to what can be accomplished by a massive infusion of federal capital, but it was virtually a creation of the twentieth century—when explorer Juan Rodriquez Cabrillo marked the inlet on his crude seventeenth-century chart, it was little more than a dismal and barren mud flat. Compared to the several dozen accessible ports and harbors on the Atlantic Seaboard and Gulf Coast then, California is an inhospitable coast. Even worse, in many parts of the state, the rocky promontories that make up the coastline make inshore navigating virtually impossible.

Added to the paltry list of safe harbors are other natural barriers. The prevailing California Current is powerful: running at a quarter knot, it makes for treacherous sailing along the North American Pacific coast. Originating in the waters off British Columbia, the current flows southward through Baja California.⁵ The tide reveals a five-to-seven-foot difference during the daily cycle, further hampering maritime activities. Prevailing northwesterly winds add to the current's effects, causing considerable upwelling of colder subsurface waters, the result being the characteristic California coastal fog, and a continual replenishment of nutrients to the surface layer. The chilly California Current transports great amounts of enriched, mineral-laden water from the depths; this sustains large amounts of plankton, which, in turn, serve as food for larger marine life. The rich fish resource also

3 Alta California described that which lies north of the Baja Peninsula and which would be transferred to the United States as a consequence of the Treaty of Guadalupe Hidalgo that ended the Mexican-American War.

4 Morgan Gibson Arrell and John Whitehead, *Yankees in Paradise: The Pacific Basin Frontier* (Albuquerque: University of New Mexico Press, 1993), 15.

5 The California Current is part of the North Pacific Gyre, a system that also contains the Japan (or North Pacific) and Kuroshio Currents.

sustains millions of fish-eating birds, a rich pelagic community, sea otters, and countless other forms of life. These nutrients provide ample food for whales and other marine life, but the conditions that make good eating for one species make bad sailing for others. With the prevailing winds and currents beating in the face of northward sailors, it is little surprise that the development of the Pacific coast is a relatively recent phenomenon. Sailors heading north from South America were more likely to find themselves propelled into the Pacific than guided toward California's shores. When they were lucky enough to avoid being pushed out to sea, other natural features added to the difficult nature of navigating along the California coast: offshore islands such as Bishop Rock (near San Diego) and the Farallones (a group of six windswept islands that lie twenty-eight miles west of San Francisco); tremendous kelp beds at Monterey and Morro Bay; and a hazardous bar crossing at Humboldt Bay. Add to this the notorious fog-shrouded entrance to San Francisco and the windswept precipices of the Redwood Coast, and you have a recipe for disaster. Perhaps these physical features, more than any other factor, are to blame for the 1,547 shipwrecks currently documented in California waters.⁶

Thomas P. H. Whitelaw

The perilous waters, congested shipping lanes, and assorted hazards of San Francisco Bay and the entire California coastline invite disaster. But disaster invites opportunity, and Captain Thomas Whitelaw was nothing if not opportunistic.

Arriving penniless in the United States from his native Scotland, the entrepreneurial Whitelaw achieved success by profiting from the misfortunes of others. Whitelaw arrived in San Francisco in 1863, at the tender age of sixteen. By 1875, he was involved in marine salvage, and remained an active salvage diver for the next six decades. Salvage divers sped to the site of shipwrecks, rescued imperiled crew members, and negotiated with ship captains based on the value of any vessel or cargo they could reclaim from the sea. Whitelaw was the best at his business. Using the lumber schooner *Greenwood* and an eponymous 176-ton steamer, he was able to both modernize and professionalize the marine salvage industry. Utilizing equipment that today would be deemed antiquated but which represented the cutting edge of salvage technology in his career, Whitelaw was able to amass a considerable fortune by retrieving some 300 vessels and cargo that had been lost to the sea. Throughout his career, divers associated with his company made some 17,000 dives.

Whitelaw's career was subject to scorn and derision, but the work of his crews was instrumental in saving countless lives, both directly—from those who were plucked from icy waters—and indirectly—by the information that divers furnished to government agencies responsible for improving navigation along California's waterways. Whitelaw died in 1932, at age eighty-six.

6 California State Lands Commission, "California Shipwreck Database," <http://www.shipwrecks.slc.ca.gov>. See also Donald B. Marshall, *California Shipwrecks: Footsteps in the Sea* (Seattle: Superior Publishing Company, 1978). James P. Delgado and Stephen A. Haller, *Shipwrecks at the Golden Gate: A History of Vessel Losses from Duxbury Reef to Mussel Rock* (Nevada City, CA: Lexicos, 1989) details Bay Area marine casualties. See also James P. Delgado, "Searching for History: Underwater Archaeology at the Golden Gate," *Sea Letter* 64 (2003): 11–14; Robert C. Belyk, *Great Shipwrecks of the Pacific Coast* (New York: John Wiley and Sons, 2001); and Bonnie J. Cardone, Ed Grove, and Patrick Smith, *Southern California Shipwrecks* (Birmingham, AL: Menasha Ridge Press, 1990).

Furthermore, while there are innumerable rivers, streams, and inlets that provide access to the interior along the East Coast, few such channels exist along the California shoreline. About the only advantage the Pacific coast has relative to its eastern counterpart is proximity to the shoaled areas of the Gulf of the Farallones. Here, offshore fishermen could access seemingly inexhaustible supplies of various commodities. Not much farther south, one encounters deep trenches: where the Continental Shelf extends far to sea on the Gulf and Atlantic coasts, it plunges quickly off the Pacific coast, with depths of over 100 fathoms (600 feet) found just a few miles from shore. Off Monterey, for example, there looms an undersea chasm as wide and deep as the Grand Canyon. The effects of such depths can be seen in the forests of kelp hugging the shore and the huge populations of sea otter, sharks, and other life that teem in the region. In addition to rich fisheries, the deep trenches contain valuable oil deposits (at one time California produced a million barrels of petroleum per day, and the American military efforts of both World War I and World War II were largely fueled by California oil) and a complicated and complex ecology. Offshore, gray whales migrate annually to their breeding grounds, while countless other species—from dolphins to salmon and tuna—swim in huge schools or as solitary passersby. Closer to shore, the biotic exuberance of innumerable tide pools attract and enchant everyone from preschoolers to postdoctoral marine biologists.

Even if one were to overcome these obstacles and arrive on the shores of California, other impediments remain. While the Sacramento-San Joaquin-Stockton River system allows for entree into the rich agricultural interior of the state—averaging 50 miles wide and at more than 400 miles long, the Central Valley represents the largest agricultural region west of the Rocky Mountains—it remained hidden for centuries. The fog-shrouded entrance of San Francisco Bay, into which the rich system emptied, was obscured by the natural camouflage of the region: large islands and the low-lying hills of the Contra Costa blanketed the harbor's narrow inlet. Passing mariners, therefore, had little clue that therein was housed the most prodigious bay in the American Pacific—a harbor “large enough to house all the ships in all the world's navies.”⁷ Indeed, in one of the great ironies of American maritime history, San Francisco Bay was discovered not by mariners, but rather by members of an overland expedition, sent north from Monterey to thwart competing imperial Russian interests in the region.⁸

Once landfall is made, overland explorations into the interior of the state are difficult. Tremendous mountain ranges—the Sierra Nevada, Cascade, Klamath, Tehachapi, Coast, Transverse, and Peninsula—block access by terrestrial routes, but their snowcapped peaks provide runoff precipitation that feeds the rivers that cross the state. The runoff, in turn, is carried by a series of rivers that supply drinking water for urban residents and irrigation for rural farmers. The Sacramento River, longest in the state at 382 miles runs from Mount Shasta in the southern Cascade Mountains to its junction with the San Joaquin River, a river that rises in the Sierra Nevada near Yosemite and meanders northward for 330 miles. The San Joaquin is itself composed of the Tuolumne, Stanislaus, Fresno, Merced, Calaveras, Consumnes, Mokelumne, and other smaller rivers, and flows through the trough of the

7 Cited in K. Malletto, *The Discovery of San Francisco Bay (1542–1769)*, http://www.foundsf.org/index.php?title=The_Discovery_of_San_Francisco_Bay

8 On the early discovery of San Francisco Bay, see Miguel Costanso, *The Discovery of San Francisco Bay, The Portol Expedition, 1769–70* (Lafayette, CA: Great West Books, 1992).

Central Valley, bringing much-needed water to that agricultural district. The Central Valley was covered by the Pacific Ocean in prehistoric times and by huge freshwater lakes created by retreating Sierra glaciers. These forces deposited rich alluvial soil and minerals that account for the productivity of the land, productivity that is replenished and assured by the waters of the Delta today.

The rivers can be anything from turbulent to placid, depending on precipitation levels, elevation changes, and countless other factors. Other tributaries, such as the American, Feather, McCloud, Indian, Yuba, and Pit Rivers, join the confluence, uniting to form a large inland San Joaquin-Sacramento Delta that empties into Suisun Bay, the extreme eastern arm of San Francisco Bay. This, in turn, forms one of the largest estuaries in the United States and is a haven for waterfowl and birdwatchers alike. The innumerable rivers, channels, and sloughs mix with tidal marshes to form one of the richest environments in North America: the Delta. Thick with wildlife and serving as a nursery for countless species, the Delta can be seen as “California’s Everglades,” home to species found nowhere else. It also represents the only break in the mountains that separate the Central Valley from the Pacific coast; as such, almost the entire drainage of the valley passes through this hourglass delta, and from the Carquinez Strait into San Pablo and San Francisco Bays and the Pacific beyond.

Further north, along the Redwood Coast, the eastern slopes of the Coast Range are drained by the Russian and Klamath Rivers (and several smaller ones), which provide access to the interior, but which for all intents and purposes are adumbrated and truncated waterways that obscure more than they reveal. South of San Francisco, interior access is equally difficult, as the 155-mile Salinas River is the most notable egress into the Coast Range. In the southern part of the state, the 1,450-mile Colorado River runs across the California-Arizona border before flowing directly into the Sea of Cortés (Gulf of California). The Colorado River is one of the few reliable water sources in an otherwise arid region; other southern California rivers are intermittently dry creek beds, and are unreliable even in wet weather. Despite these conditions, conditions that determine much of the economy of the Southwest, California has more than its share of water when compared to other regions, although it is not always where most needed.

Indeed, although the state as a whole receives sufficient water for its needs, precipitation is spotty and uneven: most occurs between November and April, and some areas receive comparatively little in relation to other parts of California. In the Sacramento River valley, periodic floods have inundated the communities of Stockton, Oroville, and others; in the arid southwest, precipitation is so rare that agriculture and animal grazing are virtually unheard of. Thus, water must be stored carefully and transported over long distances for distribution; much of the water needs to be diverted for irrigating farmland, for hydroelectric purposes, and to serve as drinking water for parched Californians. State and federal projects dealing with water reallocation issues have resulted in historically heated debates, and sometimes, in tragically heated actions.⁹

9 For more on this issue, see Robert Sauder, *The Lost Frontier: Water Diversion in the Growth and Destruction of Owens Valley Agriculture* (Tucson: University of Arizona Press, 1994); Marc Reisner, *Cadillac Desert: The American West and its Disappearing Water* (New York: Penguin Books, 1993); and John W. Simpson, *Dam!: Water, Power, Politics, and Preservation in Hetch Hetchy and Yosemite National Park* (New York: Pantheon Books, 2005).

In contrast to this abbreviated river system, California has several hundred lakes, ranging from the Salton Sea, formed in 1905 when the Colorado River broke its banks and flooded an ancient lakebed (at 233 feet below sea level, this briny lake covers some 376 square miles), and Lake Tahoe (deep and picturesque, it sits high in the Sierras, at 6,225 feet, forming part of the state boundary between California and Nevada) to manmade reservoirs and watersheds. Many of the natural lakes, such as Tahoe, resulted from glaciation and seismic activity such as faulting, which are largely responsible for the imposing mountain ranges that so define California's landscape. Today, the lakes—both natural and manmade—are used for irrigating the agricultural sector of the state, for providing drinking water to the residents of Los Angeles and other communities, and for recreational purposes by millions of outdoorsmen and their families. In centuries past, aboriginal persons used the bounty of the waters to supplement their diet, transport goods, and maneuver war parties from one part of the state to another.

The few accessible deepwater harbors along the California coast are notable for their geography and their history.¹⁰ Moving north from Mexico, one encounters, in turn, San Diego, Monterey, San Francisco, and Humboldt. While numerous smaller inlets and coves dot the coastline, these four ports are the only ones capable of accommodating anything larger than a sloop or pinnace. Each has various advantages and drawbacks, but all are valuable given the relative paucity of other safe anchorages along the California coast.

San Diego, a landlocked natural harbor of a dozen miles, was the first California harbor European mariners encountered.¹¹ Located 16 miles north of the Mexican-American border, and 110 miles south of Los Angeles, the harbor was described by Sebastian Vizcaino, a mariner sailing in the employ of Spain, as “the best in all the South Sea.”¹² San Diego is protected from the Pacific Ocean by a slender, mile-long strip of land known as the Silver Strand. Point Loma, a 7-mile-long promontory, provides further protection from the capricious Pacific winds, making the bay an attractive location for sailors past and present. The bay, like most other Pacific seascapes, was formed by a combination of seismic activity and glacial movement. The sliding of one plate past another, or the diving of one plate beneath its neighbor, formed natural depressions infilled by water retreating glaciers left during successive ice ages.

Since the time of the conquistadores, San Diego has been used as a shipbuilding and repair facility; today, the port is home to the largest shipbuilding facility on the West Coast. Another defining feature of San Diego's past is its connection to the military: from colonial outpost and Spanish presidio to “birthplace of naval aviation,” the community has always had a strong military presence. Since the early years of the twentieth century, the city has taken on an increased martial tone, and has served as home to the United States Navy, becoming a veritable military town. Today home to a large naval fleet, the port also boasts

10 For a good overview of California's ports, see James H. Hitchman, *A Maritime History of the Pacific Coast, 1540–1980* (New York: University Press of America, 1990). See also Harriet E. Huntington, *California Harbors* (Garden City, NY: Doubleday, 1966).

11 For a good overview, consult Donald R. Stewart, *Frontier Port: A Chapter in San Diego History* (Los Angeles: The Ward Ritchie Press, 1965).

12 Richard F. Pourade, *The Explorers: The Brave Men Who First Saw California* (San Diego: Union Tribune Publishing Company, 1960).

the largest concentration of naval facilities in the world.¹³ Currently headquarters to the Eleventh Naval District and for US Marine Corps and Coast Guard bases, one can witness a frenetic pace of training, as shore boats ferry military personnel from ship to pier or as new recruits endure basic training in the immediate area. Many current residents are active or retired military, who enjoy the relentless sunshine and access to Southern California attractions. The city of San Diego and its environs, moreover, boast a number of highly touted educational institutions, and a world-class maritime museum, that present a well-detailed history of the region's relationship with the sea. Today, recreational fishing parties return with catches of yellowtail, barracuda, and swordfish, although the tuna clippers that once brought in huge hauls of the fish that made San Diego a sportfishermen's paradise for decades have ceased to be profitable.¹⁴

Moving north, one finds ample anchorage for smaller craft, but none that could accommodate the larger sailing ships of the Iberian imperials or their later counterparts. The first suitable deepwater port north of San Diego, and one of the few between that port and San Francisco, is Monterey. A semicircular bay, Monterey contains an enormous amount of marine life: mammals such as sea otters, harbor seals, and bottlenose dolphins share the waters with gray whales that make use of the Monterey Canyon, an underwater trough two miles deep. The canyon's depth and nutrient availability, owing to the regular influx of nutrient-rich sediment, provide a habitat suitable for many marine life forms. Known today mostly for its world-class aquarium and access to the golf course communities of Carmel-by-the-Sea, the port was one of the most important in Spanish—and, later, Mexican—California. The deep waters of the bay, formed like all Pacific ports by plate tectonics, could accommodate the largest of sailing ships, and the rich marine life in the area sustained a highly profitable fishing community until to the close of the twentieth century. Now mostly a tourist location, the port continues to handle its share of fishing and pleasure craft and remains an economically vital part of the California economy. Today, the 5,300-square-mile Monterey Bay National Marine Sanctuary protects fully one-fifth of all California coastal waters and serves to educate many about the coastal environment of the Golden State.¹⁵

The major port in the American Pacific for most of its existence, San Francisco is the next harbor one would encounter sailing north along the California coast.

Deemed "large enough to house all the ships in all of the world's navies," the inlet to the bay was cloaked from view for centuries, hidden by dense fog, low-lying hills and other

13 A concise history of the military in San Diego can be found in Roger W. Lotchin, *Fortress California: From Warfare to Welfare* (Champaign: University of Illinois Press, 1992). On the navy in that community, see Bruce Linder, *San Diego's Navy: An Illustrated History* (Annapolis: Naval Institute Press, 2001).

14 On various aspects of San Diego's maritime heritage, consult Carl Reupers, *They Came from the Sea: A Maritime History of San Diego* (San Diego: Cabrillo Historical Association, 1979). On the tunafishery and its decline, see August J. Felando, "California's Tuna Clipper Fleet, 1918–1963," *Mains'l Haul: A Journal of Pacific Maritime History* 32, no. 4, and 33, nos. 1–3 (1996–1997): 6–17, 16–27, 28–39, August J. Felando, "'Into the Valley of Death': The 1950s and the Decline of California's Tuna Clippers," *Mains'l Haul: A Journal of Pacific Maritime History* 38, no. 4, and 39, no. 1 (2002 and 2003): 18–27; and Lawrence J. Bradley and Julius H. Zolezzi, "The End of the Line: The Story of the San Diego Tuna Fleet," *Mains'l Haul: A Journal of Pacific Maritime History* 44, nos. 1–2 (2008): 8–27.

15 The Monterey Bay National Marine Sanctuary is one of four such locales in the state, the others being Channel Islands National Marine Sanctuary, Gulf of the Farallones National Marine Sanctuary, and Cordell Banks National Marine Sanctuary. The National Oceanic and Atmospheric Administration manages and protects the waters and seabed of these and other national marine sanctuaries.

natural camouflage.¹⁶ Writing on the cusp of the gold rush, one prescient commentator observed:

The position of San Francisco for commerce is, without doubt, superior to any port on the Pacific coast of North America. . . . The waters are of sufficient depth to admit the largest ship ever constructed, and so completely land-locked and protected from winds is the harbor that vessels can ride at anchor in perfect safety in all kinds of weather . . . a more approachable harbor, or one of greater security, is unknown to navigators . . . this place is, doubtless, destined to become one of the largest and most opulent commercial cities in the world, and under American authority it will rise with astonishing rapidity.¹⁷

The bay, like most of the California coast, was formed by the grinding and sliding action of tectonic plates, some 8,000 years ago. The North American and Pacific plates have been involved in a sometimes balletic but more often ballistic relationship, grinding against one another or diving beneath their neighbor. These actions, aided by glacial flows, volcanic thrusts, and other natural forces, formed the rugged coastline and deep harbors of the coast. The very same forces, then, that account for seismic activity along fault lines was responsible for the creation of one of the most important seaports in world history.¹⁸

The bay is believed to have been formed by the collision of two tectonic plates, the Hayward to the east and San Andreas to the west. A downwarping of the earth's crust at this point created a shallow basin of some 400 square miles; adding the San Pablo, Suisun, and other "sub-bays"—which creates the "greater San Francisco Bay" and which is a common and accepted practice—more than quadruples this figure. During the last ice age, glaciation and runoff filled this basin, leaving only the tops of several hills—including, most notably the Farallones, Angel Island, Alcatraz, and Yerba Buena Island—above the water (which can range to a depth of 240 feet). Measuring anywhere from 3 to 12 miles wide and at nearly 50 miles long, the bay receives roughly 40 percent of all California waters, which enter through the northern estuaries of Suisun and San Pablo Bays and depart through the Golden Gate and into the Pacific Ocean. Furthermore, the geographical unity of the bay allowed for port development at virtually any point within its confines.

Since the mid-1800s, much of the original basin has been changed, either intentionally or by accident, converting it to "one of the largest and most extensively modified estuaries

16 California State Lands Commission, "California Shipwreck Database."

17 Edwin Bryant, *What I Saw in California: Being a Journal of a Tour, by the Emigrant Route and South Pass of the Rocky Mountains, Across the Continent of North America, the Great Desert Basin, and Through California, in the Years 1846–1847* (New York: Appleton and Company, 1849).

18 A good overview of and introduction to San Francisco's maritime history can be found in John Haskell Kemble, *San Francisco Bay: A Pictorial Maritime History* (New York: Cornell Maritime Press, 1957). See also Robert Schwendinger, *International Port of Call: An Illustrated Maritime History of the Golden Gate* (Woodland Hills, CA: Windsor Publishers, 1984). Wayne Bonnett, *San Francisco: Gateway to the Pacific* (Sausalito, CA: Windgate Press, 2010), looks at the role of shipping companies in international trade. Michael R. Corbett, *Port City: The History and Transformation of the Port of San Francisco, 1848–2010* (San Francisco: San Francisco Architectural Heritage Press, 2011) is a recent study that ties the development of the city to the rise of the port, paying particular attention to geographical considerations and architectural aesthetics. Jasper Rubin, *A Negotiated Landscape: The Transformation of San Francisco's Waterfront since 1950* (Chicago: University of Chicago Press, 2011) investigates the recent history of the port.

in the world.”¹⁹ Runoff from hydraulic mining operations in the Sierra foothills introduced so much sediment into the bay that its depth was permanently reduced by dozens of feet. One estimate suggests that eight times the amount of material that was excavated during the construction of the Panama Canal was added to the Bay as a result of these mining techniques.²⁰ Bay filling, whereby parts of the waterfront were cordoned off and filled in with debris to make new land, was widely practiced in the era of the gold rush, as entrepreneurs sought to create waterfront lots with access to deep water.²¹ Soil excavated from building projects or dredged from ship channels was deliberately added to these water lots to provide a foundation for later construction. The city boundaries were increased in some areas by as much as a quarter mile, leading one observer to note that the city resembled a “Venice made of pine.”²² Unfortunately, the damp substrate of these water lots is subject to liquefaction during earthquakes, and much of the damage associated with seismic activity in the region can be traced to these waterfront locations. Worse, as a result of reduced freshwater inflows resulting from damming and diverting of rivers, and owing to the introduction of pesticides and domestic and industrial wastes, the overall health and productivity of the San Francisco Bay declined precipitously after the gold rush.

Despite the impact of human settlement and industry, the Bay remains an important ecological preserve. As part of one of the world’s largest estuaries, it is home to a staggering number of organisms and species: from Dungeness crabs to sea lions and marine mammals, and from waterfowl to various species of fish, the Bay represents one of the most diverse and complex ecosystems found in the contiguous United States.²³ Brackish salt marshes support brine shrimp, shorebirds, and other organisms higher up on the food chain, all the while serving as filters, providing key ecosystem services by leaching pollutants and sediments from the water. These saltwater marshes grade into intertidal mudflats and open water, sustaining an extremely productive ecosystem that comprises one of the greatest contiguous expanses of wetland habitats on the Pacific Coast of the Americas. Today, environmental organizations are hard at work ensuring that these features remain for later generations.²⁴

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- 19 Robert Grossinger, “Documenting Local Landscape Change: The San Francisco Bay Area Historical Ecology Project,” in *The Historical Ecology Handbook: A Restorationist’s Guide to Reference Ecosystems*, ed. Dave Egan and Evelyn A. Howell (Washington DC: Island Press, 2001), 425–42.
- 20 Matthew Booker, “Oyster Growers and Oyster Pirates in San Francisco Bay,” *Pacific Historical Review* 75, no. 1 (2006): 63–88, esp. 71.
- 21 See Gerald R. Dow, “Bay Fill of San Francisco: A History of Change” (master’s thesis, San Francisco State University, 1973).
- 22 Benjamin Vicuña Mackenna, “Paginas de mi diariodurantetresanos de viaje, 1853-1854-1855,” in *Obras Completas de Vicuña Mackenna*, 2 vols. (Santiago: Universidad de Chile, 1936), 1:26.
- 23 At low tide, the bay measures 450 square miles of water within its shore line of approximately 100 miles, making it the second-largest estuary in the United States (following Chesapeake Bay); each day it handles seven times more water than does the Mississippi River Delta.
- 24 By 1960, the Bay was one-third smaller than it had been just 100 years earlier, and 90 percent of the tidal marshlands had been lost or cut off from access to water by filling, dredging, and assorted activities. By that time, nearly 2,000 acres were lost each year as a series of levees had reduced the amount of freshwater entering San Francisco Bay by one-half. John Hart and David Sanger, *San Francisco: Picture of an Estuary* (Berkeley: University of California Press, 2003).

Bay-Delta Model

The challenges of navigating in the greater San Francisco Bay Area have long plagued mariners. The impact of assorted human interactions—most notably hydraulic mining, bay filling, and dredging—have made this even more unpredictable. With these facts in mind, Congress authorized the US Army Corps of Engineers to undertake a study that analyzed the physical effects of human activity on the Bay and Delta waterways. Although the proposed damming of San Francisco Bay never materialized, this study did have one tangible result: the construction of a hydraulic scale model that covered more than an acre and a half, or about two football fields. Housed in a former shipyard warehouse in Sausalito, the San Francisco Bay-Delta Model is a three-dimensional representation of the San Francisco Bay and Sacramento-San Joaquin Delta that simulates tides, currents, river inflows, and other variables affecting water quality and movement in the estuary.

Built in 1957, the Bay Model Visitor Center provides scientists, educators, policy-makers, and citizens the opportunity to view the complete Bay-Delta system at a glance. Using 180,000 gallons of water to mimic local conditions, the model sees tides change every 3.8 minutes, and recreates the 24-hour tidal flow in just under a quarter of an hour. This allows researchers to interpret critical issues affecting the environment—such as waterborne pollution and oil spills—as well as navigation, flood control, and other hydrologic features throughout the watershed.

Advancements in computer technology have made large-scale models obsolete, as computer simulations can replicate the work of dozens of scientists and engineers for a fraction of the cost in time and resources. Today, schoolchildren have replaced scientists as the most frequent visitors to the Bay-Delta Model, and the mission has changed to one of outreach and education, as the staff focuses on the natural history of the Bay and Delta, along with critical environmental issues affecting the watershed.

Some 250 miles north of the Golden Gate, along the Redwood Coast, is the last of California's major ports. In a region full of anchorages so small that only a dog could find room enough to turn around—hence the term *dog-hole ports*—Humboldt Bay stands out as a haven for sailors and ships in need. As the second-largest natural bay in the state, Humboldt sits along a rugged, windswept coast, and is the only sizable harbor in the 600-mile-long run of coastline between San Francisco and Coos Bay, Oregon. A visitor to the region described the scene that greeted him in 1850:

The land is the most beautiful I ever saw . . . large hills sloping down to the water, and beautiful plateaus. It is a bay bountifully supplied by nature. . . . The redwood, cedar, spruce, hemlock, oak and alder abound. Fruits such as raspberries, currants, strawberries, hazels, cherries are abundant, but what exceeds all I ever saw is the quantity of game and fish—elk, deer, black and grizzly bear, beaver, otter, geese, ducks, snipe, robin, partridge—are without number.²⁵

Like San Francisco, this bay—named for the famed German scientist Alexander von Humboldt—was first “discovered” by an overland expedition, since it was blocked from

25 Quoted in Wallace E. Martin, *Sail and Steam on the Northern California Coast, 1850–1900* (San Francisco: National Maritime Museum Association, 1983), ix.

seaborne exploration by a narrow and treacherous opening that includes a hazardous bar crossing.²⁶ An extensive dune ecosystem, formed by sediments washed away by the plentiful rains in the region, and augmented by winter swells that scour the beach and add to the accumulation, sustains a rich and varied biosystem. The center of an important and lucrative logging industry in the nineteenth century, Humboldt was home to a thriving lumber and shipbuilding industry, with a beehive of activity centered on company mill towns.

The unique geography of California at once invited and thwarted maritime opportunities. While this might seem paradoxical, it is nothing new: just as modern mariners and earlier seafarers alike struggled with ways to maximize their use of California waterways without endangering the natural beauty of the region or their own safety. We shall now look at how indigenous Californians utilized the waterways of the Golden State before the nickname was applied to their homeland.

26 The dangers of the Humboldt Bar and the historic efforts to tame it are described in Susan Pritchard O'Hara and Gregory Graves, *Saving California's Coast* (Spokane: Arthur H. Clark, 1991). For the hazards of navigating the Mendocino Coast, see Karl Kortum and Roger Olmsted, "... it is a dangerous looking place": Sailing Days on the Redwood Coast," *California Historical Quarterly* 50 (March 1971): 1–19.

Lack of geographical knowledge did not prevent cartographers from producing magnificent works of art. Louis Hennepin's imaginative 1699 lithograph is among several examples that depict California as an island, separate from mainland North America.



Courtesy University of Minnesota,
James Ford Bell Library.

The deepwater anchorages and protected harbor of San Francisco made it an ideal port for mariners seeking refuge along the California coast. This modern image shows both the natural features of the Bay and Delta and the impact of human settlement and development on the region.



Courtesy United States Geological Survey.

The perils of navigating along the Pacific Coast of North America can be seen in this image, taken shortly after an accidental grounding on approach to the Columbia River bar. The French ship *Alice*, with her cargo of cement driving her deep into the sand, was a total loss. Note the individuals standing in the rigging.



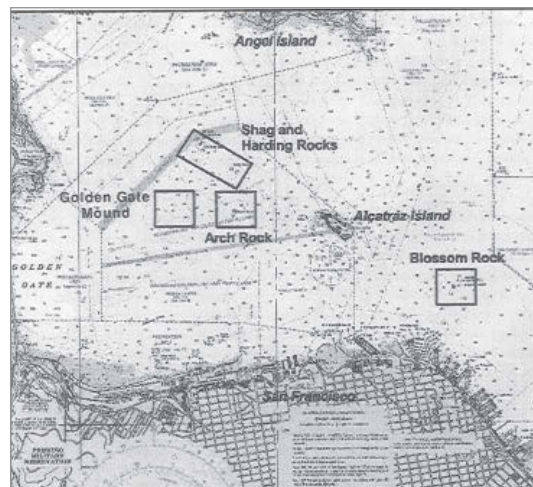
Courtesy San Francisco Maritime National Historical Park. E3.381p1.

The increasing pace of maritime activity along the West Coast demanded that impediments to navigation be removed. Here, Shag Rock is dynamited out of existence in a dramatic show captured by the photographer's lens.



Courtesy James Allan, William Self Associates, Orinda, CA. and US Army Corps of Engineers.

Modern-day hydrographic charts attest to the fact that hazards to navigation remain a prominent feature outside of the deepwater shipping channels that mark San Francisco Bay.



Courtesy National Oceanographic and Atmospheric Administration.

Among the most dramatic impacts of human activity on the Bay was the use of hydraulic mining in the Sierra foothills during the gold rush. These images show various ways by which loose topsoil was washed away to expose veins of precious metal. Flumes and water cannon had a disastrous environmental impact. The runoff altered the depth of downstream waterways appreciably, and marked a significant change to the San Francisco Estuary ecosystem.



These images were taken at the Malakoff Diggings along the South Yuba River, in 1876 by photographer Carleton E. Watkins. Courtesy Hearst Mining Collection, University of California, Berkeley.

The US Army Corps of Engineers seeks to educate tourists and residents about the impact of everyday decisions on the ecosystem of the Bay. The Bay Model Visitor Center in Sausalito is an interactive exhibit that allows visitors to realize the importance of environmental stewardship.



Courtesy US Army Corps of Engineers.

CHAPTER 2

INDIGENOUS USES OF CALIFORNIA WATERWAYS

A cursory glance at coastal population distribution and density shows that demography is barely changed: today, most Californians, Americans, and world citizens live, work, and play along coasts and waterways. This is not new, nor likely to soon change. As long as there have been humans in California, they have been drawn to the sea. Long before European immigration and settlement, the 300,000 or so indigenous persons—nearly one-third of all Amerindians in the contiguous United States on the eve of the Columbian Encounter—calling California home tended to congregate along the rivers, lakes, and coastline to maximize transportation patterns, supplement their meager diets, and increase their martial capabilities. While modest by modern standards, precontact California was the most densely populated area north of Mexico. Favorable climate and abundant natural resources attracted indigenous Americans, though few complex civilizations existed. Triblets of 50–300 persons were normal, and more than twenty language groups in precolonial California further divided into scores of dialects, suggesting that—despite a robust trade network and a shared approach to the sustenance and stewardship of the ecosystem—the various communities had little in common.¹

Human habitation of California traces to approximately 8,000 BCE, and from that early period, persons who called the region home lived near the sea. Recent archaeological evidence points to maritime activity in California dating back some 8,000 years. According to the Clovis theory, humans migrated across the Bering Land Bridge from Asia, gradually populating the Americas. Recent interpretations show these Stone Age peoples as maritime migrants.² Using driftwood rafts, dugout canoes, bidarkas, umiaks, and other craft, Neolithic Americans quickly populated the Pacific coast from Alaska to Tierra del Fuego.³ Presumably knowledgeable in navigation and technology perhaps including the sail, these individuals quickly recognized the prospects and perils of California's waterways.⁴

The 20,000 or so who settled around San Francisco Bay—primarily members of the Coast Miwok and Ohlone (meaning “Western peoples”) tribes—were among the most adept of all indigenous Californians at maritime endeavors. Employing local varieties of tule reeds, these mariners built craft for travel on the inland waterways of the Bay where they fished, gathered shellfish, or collected salt from marshlands ringing the estuary. Using construction techniques common to global temperate regions from Lake Titicaca to the Nile River Delta,

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- 1 Recent statistics claim 135 languages spoken by the nearly 500 different tribal groups. See Ramon A. Gutierrez and Richard J. Orsi, eds., *Contested Eden: California before the Gold Rush* (Berkeley: University of California Press, 1988).
 - 2 On Clovis culture in California, see E. James Dixon, *Bones, Boats, and Bison: Archaeology and the First Colonization of Western North America* (Albuquerque: University of New Mexico Press, 1999). Biological evidence for alternatives to the Clovis theory can be found in Theodore Schurr, “Mitochondrial DNA and the Peopling of the New World,” *American Scientist* 88, no. 3 (May–June 2000): 246–53. See also Dennis Stanford and Bruce Bradley, “Ocean Trails and Prairie Paths?: Thoughts about Clovis Origins,” in *The First Americans: The Pleistocene Colonization of the New World*, ed. Nina G. Jablonski (San Francisco: California Academy of Sciences, 2002).
 - 3 On the maritime migration route, see Tom Koppel, *Lost World: Rewriting History—How New Science is Tracing America's Ice Age Mariners* (New York: Atria Books, 2003).
 - 4 On indigenous uses of California waterways, see Terry L. Jones, ed., *Essays on the Prehistory of Maritime California*, (Davis: Center for Archaeological Research, 1992).

the craftsmen gathered tule reed stalks several feet long, bundled them on both ends, and slathered the design with bitumen or other naturally occurring resins. From start to finish, the entire process from harvesting the reeds to drying and bundling them took as little as three days. More commonly, the process took a few weeks: green bulrush (*Scirpus acutus*) was cut, usually with a sharpened clam shell, and spread out to dry for several days. Once partially dried, the bulrush was formed into cigar-shaped bundles, their length depending on the desired size of the craft.⁵ The larger canoes reached 20 feet long and 6 feet across. The bundles were tied together at the stern and bow to form a raised point, and a willow pole ran the length of the canoe, adding longitudinal support. Relying more on the natural buoyancy of the material than on a true displacement hull, the craft served its owner well, allowing his search of abalone or other shellfish. Some craft featured rudimentary sails, allowing longer voyages (some scholars have surmised that members of the Ohlone and Miwok tribes were able to voyage to the Farallon Islands to collect seabird eggs), but most were used on the bay's protected waters. An eighteenth-century observer, viewing them through the ethnocentric lens of the day, described the "miserable straw canoes" thusly:

They were the most sorry contrivances for embarkation that I ever beheld. The length of them was about ten feet, the breadth about three or four. They were constructed of rushes and dried grass of a long, broad leaf, made up into rolls the length of the canoe, the thickest in the middle, and regularly tapering to a point at each end. They are so disposed that on their ends being secured and lashed together, the vessel is formed, which being broadest in the middle, and coming to a point at each extremity, goes with either end foremost. The rolls are laid and fastened so close to each other that in calm weather and smooth water I believe them to be tolerably dry, but they appeared to be very ill-calculated to deal with wind and waves.⁶

While not perfect—the reed craft could absorb up to two tons of water—the tule balsas were efficient and reliable, allowing for navigation along the rivers, creeks, and flooded areas of the Central Valley. The short-passage craft were for collecting mollusks, abalone, and other shellfish. Communities from Alviso to Petaluma used these natural, abundant resources and their detritus of sediments, marine shell, ash, and rock—activities still seen in shell mounds found at various locations throughout the region. Measuring 9 to 183 meters in diameter and 1 to 9 meters in height, these oval or oblong shell mounds date from approximately 3,500 years BCE, and served as sociopolitical and ceremonial centers.⁷ Representing the earliest human modification of the bay-shore landscape, shell mounds connected living members of a tribe to their ancestors, and served as territorial symbols for local village communities, providing a cultural map of the bay communities.

5 Fray Vicente Santa María, who accompanied the *San Carlos* when that ship became the first European vessel to enter the Golden Gate in 1775, reported seeing two balsas, containing eight natives total. Quoted in Joshua Paddison, ed., *A World Transformed: Firsthand Accounts of California before the Gold Rush* (Berkeley: Heyday Books, 1999), 41.

6 George Vancouver, *Vancouver in California: 1792–1794* (Los Angeles: Glen Dawson, 1953).

7 In 1925, N. C. Nelson, an archaeologist working for the University of California at Berkeley identified 425 mounds remaining at various locales around the bay, and warned that hundreds of other sites had already been destroyed. See N. C. Nelson, "Shell Mounds of the San Francisco Bay Region," *University of California Publications in American Archaeology and Ethnology* 7 (1909): 309–48. Twenty-five of these were said to be in the confines of San Francisco County.

Unlike mounds elsewhere in the Americas (such as the Ohio Valley) used exclusively as burial sites, Bay Area shell mounds served a variety of purposes, and some interpreters believe they offer a key to understanding the early inhabitants of the central California coast. Located primarily at sites where freshwater streams emptied into the bay, they formed over centuries by accretion, allowing for in-depth archaeological analysis into past uses of California's waterways. Shell-mound debris, for example, provides a unique window into the diet and overall lifestyle of earlier civilizations. There is good evidence to suggest that coastal peoples used these mounded sites as residential spaces, where they ate, slept, worked, and socialized, and as ceremonial places, where they buried their dead and performed ritual activities. Recent analysis of midden sites throughout the Bay Area prove the extensive relationship between local inhabitants and the marine ecosystem: mounded villages, constructed on tidal mudflats, kept residents "high and dry" while providing easy bay access. Used for sacred and domestic purposes, from residences and graveyards to processing facilities for estuarine resources and a communal dump, stratigraphic analysis of the shell mounds reveal that early Bay Area residents consumed mollusks in tremendous proportions, and that shellfish might have accounted for as much as 30 percent of their daily caloric intake.⁸ One estimate, which dates the most ambitious period of shell-mound construction to the Late Holocene period (roughly 2,000 years ago), suggests that every inhabitant of these coastal communities consumed upward of fifty mussels per day. Moreover, the mounds held tremendous symbolic significance, representing "food" and "home," among the two most powerful symbols in any cultural system. Owing to a variety of factors—environmental degradation, population movements, reorganization of local communities, and subsistence changes—the mounds eventually transformed from residential to ceremonial sites: the absence of mention by Spanish explorers that natives occupied such locations is one clue to this change in use and function. As non-mounded Bay Area villages became the norm, shell mounds retained their importance as burial sites and as locations for occasional sociopolitical meetings.⁹

Emeryville Shellmound

Among the most notable of the several hundred shellmounds located throughout the greater Bay Area was one situated in Emeryville, along the Temescal Creek that enters San Francisco Bay between Oakland and Berkeley. Formed over two millennia (from 500BCE to 1,700 CE) it stood over 60 feet (18m) high and ranged some 350 (110m) feet long, dominating the landscape and towering above the handful of other midden sites in the immediate area. Home to a large village, it was recognized as an archaeological deposit from the first recorded settlements of the East Bay, and was the scene of one of the first archaeological excavations in the United States. The site, like most others, served several roles: it kept its residents above the tides of the bay, provided a vantage point

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- 8 Kent Lightfoot and Edward M. Luby, "Late Holocene in the San Francisco Bay Area: Temporal Trends in the Use and Abandonment of Shell Mounds in the East Bay," in *Catalysts to Complexity: Late Holocene Societies of the California Coast*, ed. Jon M. Erlandson; and Terry L. Jones, *Perspectives in California Archaeology* 6 (Los Angeles: Cotsen Institute of Archaeology, University of California Los Angeles, 2002).
 - 9 Edward M. Luby and Mark F. Gruber, "'The Dead Must be Fed': Symbolic Meanings of the Shellmounds of the San Francisco Bay Area," *Cambridge Archaeological Journal* 9, no. 1 (1999): 95–108. See also Kent G. Lightfoot, "Cultural Construction of Coastal Landscapes: A Middle Holocene Perspective from San Francisco Bay," in *Archaeology of the California Coast during the Middle Holocene*, ed. Jon Erlandson and Mike Glasgow (Los Angeles: UCLA Institute of Archaeology, 1997).

from which to hunt and fish, and was the site of internments that established genealogies and territorial rights. Archaeological excavations conducted by the University of California at Berkeley in 1924 revealed over 700 burials at the site.

The land had already been abandoned by the Ohlone residents when the Spanish arrived in the 1770s. Granted to Luis Maria Peralta, it became the site of a rancho, complete with stables and slaughterhouse. Following the Gold Rush, the site was subdivided and sold to successive owners. By the late nineteenth century, it housed an amusement park (Shellmound Park), racetrack (California Jockey Club Racetrack), shooting range, and dance pavilion. Over time, the mounds were razed as the region developed along various tracks. In the process, parts of the shellmound were used as bay fill, as paving asphalt, or as fertilizer for public gardens and parklands. As Emeryville modernized, the site became home to heavy industry, including a steel mill, cannery, and paint manufacturer. Not surprisingly, these activities led to high levels of soil and groundwater toxicity.

The development of mixed-use retail and residential space in the area during the 1990s uncovered significant archaeological evidence, including numerous human remains. Despite the efforts of preservationists, the region was developed with the disturbed remains being moved to a location near their original discovery. A small memorial park remains in memorial to the shellmound.

The Emeryville Shellmound is listed in the California Register of Historic Places, #335.

Far to the south, members of the Chumash tribe, located along the coast around Santa Barbara and Ventura, constructed plank boats called *tomols*, renowned for their versatility and seaworthiness.¹⁰ Unique to the Americas and representative of the finest technological and shipwrighting skills of indigenous Californians, tomols are split-planked canoes that lack an internal frame, but utilize the natural properties of the redwood from which they were routinely composed. In use for some two thousand years, the vessels, similar to seagoing canoes found in Polynesia, represent the pinnacle of indigenous California shipbuilding technology. Nearly all of the Spanish diarists described these marvelous boats and were unanimous in their praise. For example, in 1602, the Spanish explorer Sebastian Vizcaino visited the Chumash and observed:

A canoe came out to us with two Indian fishermen, who had a great quantity of fish, rowing so swiftly they seemed to fly. They came alongside without saying a word to us and went twice around us with such speed that it seemed impossible. After they had gone five Indians came out in another canoe, so well constructed and built that since Noah's Ark a finer and lighter vessel with timbers better made has not been seen. Four men rowed, with an old man in the center singing . . . and the others responding to him. They moved with indescribable agility and swiftness, holding intercourse and commerce with the natives of the islands.¹¹

10 The Chumash lived in the Channel Islands and along the coast between Los Angeles and Point Conception, west of Santa Barbara. Their neighbors, the Gabrielinos (or Tongva), also built tomols, but those were clearly of Chumash origin. See Bruce Miller, *Chumash: A Picture of Their World* (Los Osos, CA: Sand River Press, 1998).

11 Herbert Eugene Bolton, ed., *The Diary of Sebastian Vizcaino, 1602–1603* (New York: Charles Scribner's Sons, 1913).

Almost two hundred years later, Spanish explorer Pedro Font, a member of the DeAnza expedition, noted of the tomol:

They are very carefully made of several planks which they work with no other tools but their shells and flints. They join them at the seams by sewing them with very strong thread which they have and fit the joints with pitch. . . . Some of the launches are decorated with little shells and all are painted red with hematite. In shape they are like a little boat without ribs, ending in two points. In the middle there is a somewhat elevated plank laid across from side to side to serve as a seat and to preserve the convexity of the frame. Each launch is composed of some twenty long and narrow pieces. I measured one and found it to be thirty-six palms long and somewhat more than three palms high. . . . In each launch . . . ordinarily not more than two Indians ride one in each end. They carry some poles about six feet, which end in blades, these being the oars with which they row alternately . . . now on the one side and now on the other of the launch.¹²

Collecting timbers that floated down the coast, or washed up on nearby beaches, the Chumash knew that redwood swelled when wet but did not shrink to its original dimensions when dry. This quality helped maintain a watertight fit, made more impermeable by caulking with tar and pine pitch. Only the most select woods were chosen: those with curved grains or knots were discarded, since these imperfections would cause cracking and leaking. Using whalebone or deer antler wedges, the logs were split into planks, trimmed and leveled. Large stone hammers were sometimes used to drive wooden wedges through particularly tough pieces. In the absence of Iron Age technology, the planks were rubbed smooth with stone or mollusk adzes or sharkskin sandpaper and sewn together using up to two miles of reeds, animal sinew, and other cordage.

The craft was constructed according to a predetermined pattern: the longest and straightest timber formed the bottom of the canoe; six or more planks were then bent around this central plane. The craftsmen soaked the timbers in a clay-lined pit filled with water heated to boiling with hot stones. After a few hours, the saturated wood was supple enough to be manipulated and bent into shape. Each plank rested against the edge of its neighbor, in a beveled construction far more hydrodynamic than clinker-built construction favored by Scandinavian seafarers. Tule reed thatch was pounded into the few remaining gaps and drill holes (bone needles and drills commonly used) were caulked with asphalt. A structural cross plank amidships reinforced the vessel and flourishes such as splashboards and shell inlay finished the craft. All Chumash craft were painted with rich, red ochre that announced the owner's wealth and standing; combined with the shell inlay, the craft shimmered majestically in the sunlight. Swift, light, and as long as twenty-five feet, the canoes accommodated up to two dozen persons and formed the basis of an extensive maritime economy.¹³

Not surprisingly, such boats were extraordinarily expensive. According to a Chumash informant and source for much of what is known about the tomol, "the board canoe was the

¹²Frederick J. Teggart, ed., *The Anza Expedition of 1775-1776: Diary of Pedro Font* (Berkeley: University of California Press, 1913).

¹³C. F. Richie and R. A. Hager, *The Chumash Canoe: Structure and Hydrodynamics of a Model* (San Diego: Coyote Press, 1973).

house of the sea . . . it was more valuable than a land house and worth more money.”¹⁴ Because of the vessel’s complexity and the high status of the people associated with them, the tomol’s origins trace to the mid-first millennium CE, a period with evidence of the first stratification of Chumash society. Several indications of this survive into the historic period. Of unique character was the importance of swordfish, caught only at sea from tomols, especially after about 1400 CE. Exploited not only for food, the capture of this large and dangerous prey also accompanied an increase in the swordfisherman’s status. His success, in turn, was reflected in the ritual of the Swordfish Dancer, whose regalia included a headdress incorporating the head and sword of the swordfish. According to another Chumash informant, “The Indians used to say: ‘All, whatever there is in the ocean is just like everything that is here on this earth . . . we are the people of this land, the people of the ocean are the swordfish.’”¹⁵ Font noted the status conferred by craft ownership:

Among the men I saw a few with a little cape like a doublet reaching to the waist and made of bear skin, and by this mark of distinction I learned that these were the owners and masters of the launches. . . . When it [the canoe] arrived at the shore, ten or twelve men approached the launch, took it on their shoulders still loaded with the fish and carried it to the house of the master or captain of the launch. . . . in each village they have fifteen to twenty canoes, and in each one they were making not less than seven to ten new ones.¹⁶

Men kneeling in the hull used double-bladed paddles to propel the craft. Highly maneuverable and so light they could be carried by two persons, the vessels were beached and dragged above the tideline when not in use. Frequently, canoemen operating these surf-boats kept time and rhythm by coordinating their strokes through chants and canoe songs, repeating a strategy of seafarers around the world from Polynesia to the British merchant marine. The tomols were used for fishing, sealing, and whaling; for coastal commerce (particularly for runs to the Channel Islands, a round trip of up to 130 miles, where mainland Chumash acquired steatite, a stone used for soapstone bowls and figurines), and, some suggest, long-distance trade. Ranging from 12 to 24 feet long, and with a beam of 3 to 4 feet, the craft could accommodate a small fishing, trading, or war party. With room for up to two tons of cargo, natives from Point Conception to Santa Monica Bay created an extensive trading network to the outlying islands, moving between well-defined points illuminated by fires. One prominent shipping lane traversed the narrowest point between Anacapa and Hueneme: this route took advantage of the calmer waters offered by the Channel Islands, which blocked seasonal winds and swells. Almost certainly, the boats launched during morning hours, when winds were calm. For weeks on end, when the Santa Ana winds were particularly daunting, the Chumash did not put to sea at all.

14 Travis Hudson, ed., *Tomol: Chumash Watercraft as Described in the Ethnographic Notes of John P. Harrington* (Menlo Park, CA: Ballena Press, 1978), 39.

15 Demorest Davenport, John R. Johnson, and Jan Timbrook, “Chumash and the Swordfish,” *Antiquity* (June 1993): 258, 263–65.

16 Teggart, *The Anza Expedition of 1775*.

Another indicator of the tomol's importance was its surrounding secrecy. Among the Chumash, the men who made and used the tomol belonged to the "brotherhood of the tomol," one of the many Chumash craft guilds, and members of the brotherhood called each other by kinship terms. The main activities of the brotherhood were building and maintaining these craft, and fishing and trading with the Channel Islands. Some archaeologists and linguists point to shared connections between the Chumash and ancient Polynesians—suggesting that the tomols were so expertly constructed that they were used for trans-Pacific commerce—but these conjectures tend to devolve into heated debates that obscure the true ingenuity and beauty of the vessel design.¹⁷ One thing on which scholars agree is the high level of craftsmanship associated with the Chumash craft, which represent the only planked boats built in North America prior to European contact. Yet for all its importance, the tomol represents a dead end in the development of nautical technology. There are no other offshore destinations and the coast is relatively free of natural harbors, so the shipwright's art may simply have gone as far as was needed. Even so, it is strange that there was no incentive to exploit the existing technology more fully for the development of maritime trade among the islands and along the coast of southern California.

Elsewhere along the coast, indigenous persons used waterways for commercial, martial, and recreational purposes. The discovery of fish traps at several sites along the mountainous, stream-rich northern coast revealed a sophisticated system of fisheries management and harvesting from local members of the Yuki, Tolowa, Karok, Hoopa, Mattole, and Wailaki tribes netting salmon or spearing trout during their annual runs. On a river stand in the span of a few months, an indigenous family easily caught, dried, and stored enough fish for a year. To the peoples of the Pacific Northwest, salmon represented the alpha and the omega of their existence, and assumed a prominence equal to corn for the eastern tribes and bison for the Plains Indians. They augmented their considerable catch with large quantities of cod, halibut, shellfish, and, on occasion, the eulachon, or candlefish, a trade item of high quality. Natives netted candlefish and rendered them for oil used as food dressing, or dried for later use as an illuminant. Most of their travel was on rivers or along the seacoast where intrepid hunters sought sea otter, seal, and whales from large dugout canoes, some of which accommodated fifty oarsmen and held three tons of cargo.

Here, vessel construction varied but most prominently featured dugout construction. Yoruk, Wiyot, and other coastal peoples used boatbuilding techniques commonly associated with the Haida of the Pacific Northwest. Using redwood logs felled by storm or lightning strike, the villagers floated them downstream to a village beach. Here, craftsmen hollowed the trunk out with stone tools or beaver-tooth chisels. The sides were stretched by steaming the trunk, allowing them to become both more hydrodynamic and commodious. While vessels could be broadened by steam-stretching techniques, they were limited in length by the size of the tree from which they were constructed. The longest dugout canoe, a sixty-four-foot behemoth outfitted with sail and capable of accommodating a crew of thirty, was constructed by the Haida of British Columbia, but it is not beyond reason that craft

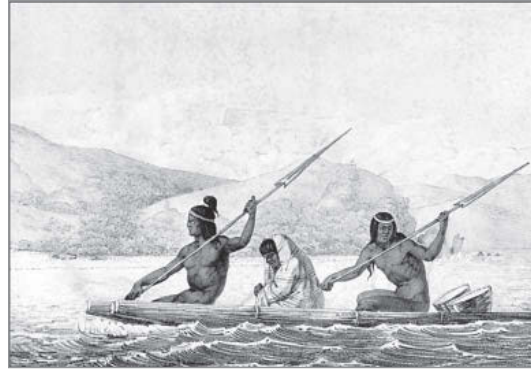
17 Terry Jones and Kathryn Klar, "Diffusionism Reconsidered: Linguistic and Archaeological Evidence for Prehistoric Polynesian Contact with Southern California," *American Antiquity* 70, no. 3 (2005): 457–84. See also Atholl Anderson, "Polynesian Seafaring and American Horizons: A Response to Jones and Klar," *American Antiquity* 71, no. 4 (2006): 759–63.

of similar dimensions were built further south along the Pacific coast.¹⁸ Pomo and Miwok people, like the Ohlone to the south, thrived on shellfishing. Like their southern brethren, the peoples of the Northern California coast relied on waterways as transportation platforms, sources of foodstuffs, sites of conflict, and virtually every other imaginable use.

These myriad uses of California's waterways remained a hallmark for centuries, as evidenced by the various ways in which European and American mariners themselves viewed and utilized the California seascape. The next chapter discusses how Euro-American mariners interpreted maritime California, and what this meant for the region and its inhabitants.

18 A replica of this craft is on display at New York City's Museum of Natural History. Most dugout canoes ranged from 20 to 40 feet long and from 5 to 10 feet wide.

A trio of tule reed vessel representations. At top, a well-known drawing made by Louis Choris in 1816 depicts an indigenous family traversing the bay. A modern depiction that is part of the murals featured at San Francisco's Rincon Building and attributed to Anton Refregier is seen at center. Below, a contemporary version of a tule reed vessel, complete with sail, is on display at the Peruvian Maritime Museum, Lima.



San Francisco Maritime National Historical Park, A7.19, 417.



Photo courtesy of Paul Judge.



Author's photo.

The Emeryville Shellmound, its southern wall shown here, is among the most notable examples of this once-prominent Bay Area feature. Over 400 ringed the Bay, with some reaching over 500 feet in diameter. Photographers W. E. Schenck and L. L. Loud chronicled its destruction in 1924, when the structure was leveled to make room for a paint factory.

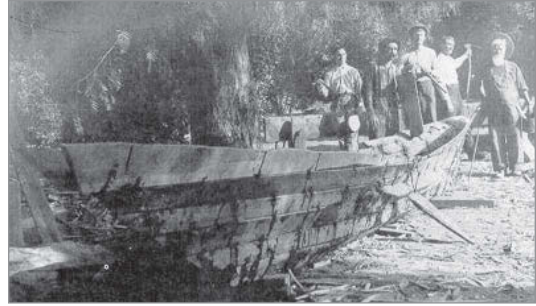


Courtesy University of California, Berkeley.
Phoebe A. Hearst Museum of Anthropology.
15-7792.

Chumash artisans stand proudly beside their latest creation in the first photograph.

Completed in 1912 under the direction of Fernando Librado for J.P. Harrington, the craft was built using traditional tools and methods. The plank canoes were fastened by hemp cordage, and coated with tar or bitumen to be made watertight.

Below, a half model of a traditional plank canoe is on display at the Santa Barbara Museum of Natural History.



Courtesy Huntington Collection,
Santa Barbara Museum of Natural History.

Traditional indigenous boatbuilding along the North Pacific coast included dugout canoes, three examples of which are depicted here. In the first, a large party of Alaskan natives are transported in style via a large version, while below, a Yurok native woman paddles a double-ender in solitude on California's Klamath River, as local youth return from a successful fishing venture.



Courtesy Alaska State Library Historical
Collections. Winter and Pond Collection.
ASL-P87-1348.



Courtesy Roberts Photograph Collection, RS Series. Humboldt State University.

EXPLORATION AND FIRST CONTACT: SPANISH CALIFORNIA

The first nonindigenous persons to encounter maritime California were Spanish conquistadores pushing north from their Mexican fiefdoms during the sixteenth century. Spain's concern with the maritime aspects of California can be traced to early in her colonial history. For much of the first two centuries of that period, however, the Iberian monarchs focused their attention on Baja California, rarely paying any but passing attention to the region now encompassing the state of California. The little import she did attach to the region was often as an outpost or adjunct to her other imperial concerns: to thwart northern interlopers, or perhaps to establish a ship repair facility and "safe harbor" for ships en route between Manila and Mexico.

Galleons laden with New World gold and silver made their way from American Pacific ports such as Acapulco and Zihuatanejo destined for Manila. There, they off-loaded their cargo in return for spices, silks, and other commodities, ushering in a global economy the likes of which had rarely been seen previously.¹ Mexican silver was one of the few commodities that Chinese merchants accepted as exchange for their goods, and from 1565—the date of a voyage by Andres de Urdaneta inaugurating the trade—represented the farthest and richest sea trade that the world had ever known, with the potential of up to 1,000 percent profit on every voyage. Always fearful of pirates and other predators, the Spanish employed convoy systems utilizing armed escorts to protect the treasure fleet; the likelihood of storms and other natural disasters loomed large, so prudent mariners often coordinated their sailing schedules around known storm seasons.² Even with these precautions, the lengthy voyage taxed even veteran crews, so mariners always sought safe ports to gather fresh water, make repairs, or otherwise protect themselves from the ravages of the sea. These determinants forced the Spanish crown to sponsor surveying expeditions of the northern California coast in the hope of finding suitable harbors for returning Manila galleons.³

In 1532, fresh off his conquest of the Aztec, Hernán Cortés sent his kinsman, Diego Hurtado de Mendoza, on a "voyage of discovery" to extend the Spanish imperial holdings north and west of what was then their current claims. Mendoza got as far as 27° north, edging into the Gulf of California before a mutinous crew forced him to send one of the ships back; of his own vessel, which remained in the waters of the Sea of Cortés, nothing but vague rumor was ever heard again. Fortuno Ximenes, pilot of an expedition sent to search for Mendoza, was equally unlucky: anchoring in a small bay near 23° north, Ximenes was the first Spaniard to land in Baja California, where he and twenty of his men were promptly killed by natives. Survivors returned to Cortés, reporting the discovery of an island,

1 See Dennis O. Flynn, ed., *European Entry into the Pacific: Spain and the Manila Galleons* (Aldershot: Ashgate Press, 2001).

2 See Carla Rahn Phillips, *Six Galleons for the King of Spain: Imperial Defense in the Early Seventeenth Century* (Baltimore, MD: Johns Hopkins University Press, 1986). See also James A. Lewis, *The Spanish Convoy of 1750: Heaven's Hammer and International Diplomacy* (Gainesville: University Press of Florida, 2009).

3 See Carla Rahn Phillips, *The Treasure of the San Jose: Death at Sea in the War of the Spanish Succession* (Baltimore, MD: Johns Hopkins University Press, 2007).

abounding in pearls.⁴ This fueled the already erroneous belief that the region was indeed the land described by Montalva in *Las Sergas de Esplandián*, where one could find black women with golden arms and riches of unimaginable quantities.

Buoyed by these reports, Cortés himself set out to investigate the claims, and on May 5, 1535, he entered a bay that many believe to be near present-day La Paz, which he called “Santa Cruz.” Convinced that he had found the mythical island of California, he stayed in this desolate land for more than a year, cursed by disgruntled and mutinous soldiers longing to return to Mexico. In 1539, the humbled Cortés sent Francisco de Ulloa north with three vessels to survey the coast. Rounding Cabo San Lucas, Ulloa reached the head of the Sea of Cortés (28° north), proving that Baja California was not, as many had thought, an island but a peninsula.⁵ The following year, sailing out of Acapulco, Hernando de Alarcon led a two-ship supply group up to the head of the Gulf of California, sailing up the Colorado River for some 270 miles.⁶

In June 1542, another expedition—also primarily motivated by greed—ventured north from Mexico. This was an attempt to locate the fabulously wealthy “Seven Cities of Cibola,” believed to lie somewhere on the Pacific coast beyond New Spain, and to ascertain a route connecting the North Pacific to the North Atlantic. The fabled “Straits of Anian”—like the equally sought after but equally disappointing Northwest Passage—were among the most important motivations for exploring the California coast. In support of these goals, Viceroy of New Spain Don Antonio de Mendoza sent Portuguese explorer Juan Rodríguez Cabrillo to “examine the western side of California as far northward as possible, seeking particularly rich countries and passages leading towards the Atlantic.”⁷ With a commission from Governor of Guatemala Pedro de Alvarado, Cabrillo—who had fought alongside Cortés—sailed north from the port of Navidad, near present-day Manzanillo, on June 27, 1542, thereby undertaking the first European exploration of the western coast of what would become the United States. Accompanying Cabrillo were a crew of sailors, soldiers, Indians, merchants, a priest, livestock and provisions for two years, and probably black slaves. Three ships, including the flagship *San Salvador*, built by Cabrillo himself, were under his command.⁸

Slowed by adverse winds, Cabrillo reached the “very good enclosed port” that is now called San Diego Bay, on September 28, 1542, naming it “San Miguel.” He probably anchored his flagship at Ballast Point on Point Loma’s east shore, there transferring his command to *La Victoria*. Departing six days later, he sailed northward exploring the uncharted coast of California and encountered the Santa Barbara Channel. Cabrillo visited many of the islands

4 Rose Marie Beebe and Robert M. Senkewicz, eds., *Lands of Promise and Despair: Chronicles of Early California, 1535–1846* (Berkeley: Heyday Books, 2001).

5 On Ximenes, see Harold Weight, *Lost Ship of the Desert: A Legend of the Southwest* (Twenty-Nine Palms, CA: Calico Press, 1959). The best treatment on maritime Spain can be found in Pablo E. Perez-Mallaina, *Spain’s Men of the Sea: Daily Life on the Indies Fleet in the Sixteenth Century* (Baltimore, MD: Johns Hopkins University Press, 1998). See also W. Michael Mathes, “Francisco de Ortega’s Third Voyage to the Gulf of California: Fantasy or Historical Reality?” *Mains’l Haul: A Journal of Pacific Maritime History* 35, no. 4 (1999): 16–25.

6 A thorough overview of the region can be found in Edward Vernon, *A Maritime History of Baja California* (Santa Barbara, CA: Viejo Press, 2009). On Ulloa, see Harry Kelsey, “La Trinidad: Ulloa’s Ship of Discovery,” *Mains’l Haul: A Journal of Pacific Maritime History* 35, no. 4 (1999): 6–15.

7 Federal Writer’s Project, *California: A Guide to the Golden State* (Washington, DC: Works Progress Administration, 1939), 42.

8 John Kessel, *Spain in the Southwest: A Narrative History of Colonial New Mexico, Arizona, Texas, and California* (Norman: University of Oklahoma Press, 2003).

along the coast, including the three largest of the Santa Barbara group: Santa Cruz, Catalina, and San Clemente. His voyage, while ultimately failing in its stated objective, added much to Spain's knowledge of the geography of the region and subsequently allowed Spain to proceed with the task of colonizing their expanded empire.

The expedition reached San Pedro on October 6, and sailed into Santa Monica Bay three days later. Continuing north, the party subsequently reached San Buenaventura (October 10), Santa Barbara (October 13), and Point Conception (Cabo Galera) (October 17). The expedition eventually reached Point Reyes (Cabo de los Reyes) but sailed right past the entrance to the Golden Gate, seeing and naming the Farallon Islands before running offshore, perhaps reaching as far north as Oregon.⁹ Because of adverse winds Cabrillo turned back, harboring at San Miguel Island, and did not progress beyond Santa Maria until November 11. A favorable wind later that day allowed them to reach the "Sierra de San Martin," probably Cape San Martin and the Santa Lucia Mountains in southern Monterey County. Struck by a storm and blown out to sea, the two vessels separated and did not rejoin until October 15, probably near Año Nuevo north of Santa Cruz. The next day they drifted southward, discovering "Cabo de Pinos" (Point Pinos) and "la Bahia de los Pinos" (Bay of Pines), today known as Monterey Bay. High winds prevented Cabrillo from sending a search party ashore, and on October 18, the expedition turned south, passing snowcapped mountains (the Santa Lucias). By November 23, they returned to their harbor—which Cabrillo named "La Posesion"—at San Miguel Island, where they remained for nearly three months.¹⁰ Cabrillo died at San Miguel on January 3, 1543, from complications of a broken bone incurred from a fall during a brief skirmish with natives two weeks earlier. On February 18, 1543, under the command of Bartolomé Ferrelo, the expedition again turned north and with favorable winds neared Cape Mendocino on February 26. The cape, named "Cabo de Fortunas" (Cape of Perils, or, Stormy Cape), lived up to its name: on March 1, the voyagers reached the present-day border of California and Oregon, but a severe storm blew the expedition back to San Miguel Island. From there, the expedition turned south, and returned to Navidad on April 14, 1543, where Ferrelo reported that the lands north of Mexico "contain neither wealthy nations nor navigable passage between the Atlantic and Pacific Oceans."¹¹

These reports did much to dampen Spanish hopes of finding wealth, eastward-leading passages, or suitable harbors for returning galleons along the California coast. Further attempts were tabled until 1584, when Francisco Gali made landfall near Cape Mendocino, in a survey that rekindled interest in the region. Gali's own voyage was largely a response to increased English interest in the region. During his three-year (1579–1582) circumnavigation of the globe, swashbuckler-turned-nobleman Francis Drake took time out from plundering Spanish treasure ships to explore the California coast, searching for the Pacific

9 The reasons for this are partially explained in H. R. Raup, "The Delayed Discovery of San Francisco Bay," *California Historical Society Quarterly* 27, no. 4 (1948): 289–96. See also Frank M. Stanger and Alan K. Brown, *Who Discovered the Golden Gate?* (San Mateo, CA: San Mateo Historical Society, 1969).

10 On Cabrillo and his expeditions, consult Harry Kelsey, *Joao Rodrigues Cabrilho* (San Marino: Huntington Library Press, 1986).

11 Robert Greenhow, *History of Oregon and California and the Other Territories on the North-West Coast of North America* (Boston: Freeman and Bowles, 1847), 63.

outlet to the Northwest passage.¹² On June 17, 1579, noting that “it having pleased God to send him into a fair and good bay, with a good wind to enter the same,” Drake put in at a bay now bearing his name, a stone’s throw north of the entrance to San Francisco Bay. Needing repairs to his flagship *Golden Hinde* and towing a captured Spanish bark, Drake and his associates made a quick reconnaissance of the region, finding “a convenient and fit harbor, fit for the life of man” with natives “without guile or treachery.”¹³ Claiming the territory—which he named “Nova Albion,” in honor of the white cliffs that reminded him of Dover—for the monarchs of England, Drake’s five-week sojourn near Point Reyes ushered in a new wave of interest in California’s coast, of which Gali’s survey was only the most obvious manifestation. His landing site also ushered in a tremendous amount of historical controversy as amateur and professional historians place the event at more than two dozen locales between Monterey and Vancouver.¹⁴

In 1592, fifty years after Cabrillo scouted the coast and just one hundred years after Columbus first spied the New World, Sebastián Rodríguez Cermeño was charged with examining the California coast “in search of those ports in which galleons might take refuge.”¹⁵ Cermeño’s voyage was likely the result of howls of protest emanating from Spanish merchants operating on both ends of the transpacific route: just years earlier, the English privateer Thomas Cavendish, commanding *Desire*, captured the richest galleon ever dispatched from the Philippines, *Santa Ana*, taking thousands of dollars’ worth of spices and other valuable commodities in an engagement off Cabo San Lucas. Ordered to “chart all harbors homeward” so that a port could be established to refit and repair the galleons before they ran the gauntlet of English pirates, Cermeño reconnoitered much of the northern California coast. Returning from Manila to Acapulco in his 200-ton galleon *San Agustin*, Cermeño painstakingly scoured the coast for suitable anchorage.¹⁶

The return trip from the Philippines to New Spain took four months, at a minimum. Departing Manila, the crew charted a course to 40° north latitude, catching the Kuroshio Current that carried them toward Alta California to Acapulco. Encountering first Trinity Bay, sixty-five miles south of the California-Oregon border, Cermeño then charted the Northern California coastline, noting a promising cove at a place he called “Bahia de San Francisco,” south of Cape Mendocino. Many speculate that this was the same location earlier utilized by Drake and *Golden Hinde*—*San Agustin* dropped anchor here on November 6, 1595.¹⁷

Cermeño’s assessment may have been wrong, as at this point a series of storms drove

12 Drake had long been a thorn in the sides of Spanish officials. Earlier in the year, he had taken six tons of specie from the galleon *Nuestra Señora de Concepcion*. The commander of the ill-fated vessel tried to outrun the Englishman, but a fouled bottom slowed his escape. On Drake, see John Cummins, *Francis Drake: The Lives of a Hero* (London: Palgrave Macmillan, 1996); and Harry Kelsey, *Sir Francis Drake: The Queen’s Pirate* (New Haven, CT: Yale University Press, 1998).

13 Samuel Bawlf, *The Secret Voyage of Sir Francis Drake, 1577–1580* (Vancouver: Douglas and McIntyre, 2004).

14 See Raymond Aker and Edward Von der Porten, *Discovering Francis Drake’s California Harbor* (Palo Alto: Drake Navigators Guild, 2000).

15 Federal Writer’s Project, *California: A Guide to the Golden State*, 43.

16 Land-Sea Discovery Group, “The Wreck of the *San Agustin*,” <http://www.e-adventure.net/sea/shipwrecks/sanagustin.html>.

17 In all likelihood, this is what today is known as Drake’s Bay.

his vessel onto the shoals, battering it to pieces.¹⁸ Not surprisingly, this was the last time a treasure-laden ship went on a voyage of exploration. Subsisting on acorns and fish supplied by local members of the Miwok tribe, Cermeño salvaged a launch—christened *San Buenaventura*—from the wreckage of *San Agustín*. He and the surviving crew members then sailed southward along the coast in the open boat, missing the entrance of the Golden Gate but making note of the port of Monterey, which he named “San Pedro Bay.” That port, which would play a pivotal role in Spanish California, was the next scene of Iberian colonial exploration.¹⁹

In 1596, Sebastián Vizcaíno explored the eastern shore of Baja California and, like his predecessors, noted the rich pearl fishery extant there. His attempts to learn more about the Pacific coast were thwarted, however, leading to a second expedition in 1602. In May that year, sailing with “three ships well officered,” Vizcaíno explored the coast a second time, sailing from Cabo San Lucas as far north as Cape Mendocino.²⁰ The first port he reached, “the best in all the South Sea,” he named in honor of his flagship *San Diego*, and a shore party landed on November 10 to assess the region.²¹ Continuing methodically up the coast, in a voyage lasting the better part of a year, Vizcaíno encountered many of the same places as earlier explorers, and several new ones. Sailing sixty years after Cabrillo, he visited many of the places his predecessor previously charted—San Diego, Santa Catalina, Santa Barbara, Point Conception, Point Reyes—but, like the earlier explorer, he too missed the Golden Gate. Most notably, Vizcaíno entered the port of Monterey, becoming the first European to set foot on its shores. Landing in December 1602, Vizcaíno named the territory in honor of the man who dispatched the expedition, Viceroy of Mexico Don Gaspar de Zúñiga Acevedo, Count of Monte Rey.

Vizcaíno was confident that the port could accommodate the largest Manila galleons and earnestly recommended it as a site fit for settlement and colonization, stating that he found “a harbor that is all that can be desired as a station for the Manila ships . . . it is a port sheltered from all winds, thickly settled with people, with great supplies of wood and water . . . it has many pines for masts and yards, and live oaks and white oaks, and water in great quantity, all near the shore”²² Despite these accolades and Vizcaíno’s recommendation, this step was not taken for another 175 years. Nonetheless, from that time on, the port was touted as one of the jewels of the Pacific, representing the seat of Spanish colonial power in Alta California. In later years, it became a center of the bustling hide-and-tallow trade that dominated the California economy in the eighteenth and early nineteenth centuries.

While Drake and the English might have represented the most tenacious and terrifying threat to Spanish colonial interests, they were not the only challenge to Spanish suzerainty

18 This was the first recorded wreck in California’s history. For a firsthand account of the wreck and subsequent voyage on *San Buenaventura*, see Donald C. Cutter, ed., *The California Coast: A Bilingual Edition of Documents from the Sutro Collection* (Norman: University of Oklahoma Press, 1969).

19 Richard F. Pourade, *Time of the Bells* (San Diego: Union Tribune Publishing Company, 1972).

20 The vessels were *San Diego*, *San Tomas*, and *Tres Reyes*. W. Michael Mathes, *Vizcaino and Spanish Exploration in the Pacific Ocean, 1580–1630* (San Francisco: San Francisco Historical Society, 1968).

21 Federal Writer’s Project, *California: A Guide to the Golden State*, 43.

22 Many surmise that Vizcaíno was overly generous in his praise and estimation, suggesting that he embellished his reports so that the expedition not be deemed a failure. This might explain why subsequent Spanish explorers had so difficult a time locating the port that Vizcaíno had so glowingly documented. See James J. Rawls and Walter Bean, *California: An Interpretative History* (New York: McGraw-Hill, 1993), 14–17.

in Northern California. Other nations, eager to find a maritime passage through the continent, to settle the region in their own right, or to locate mineral or other sources of wealth, were real threats. Among the most intimidating was Imperial Russia. For years, *promyshlenniki* (fur traders) attached to the houses of Stroganoff and other interests, probed the northern reaches of Spanish California. Vitus Bering had crossed the Sea bearing his name in 1734, planting the Russian standard in Alaska later that year, and established a Muscovite presence in North America that remained for the better part of a century. After systematically exhausting the populations of fur-bearing animals in the region, the Russians made their way down the Pacific coast, contracting with local indigenous persons working under near slave conditions to feed the insatiable fur appetite of Chinese and European customers.²³ The increased encroachment on unsettled Spanish claims did not go unnoticed by the Iberian crown, which sought to undertake a new phase of settlement and colonization to thwart the Russian threat (Russian interests would get as far south as Fort Ross, just sixty miles north of San Francisco, establishing a shipbuilding and repair facility, the archaeological remnants of which can still be seen today).²⁴ Now, rather than merely reconnoitering the coastline for suitable galleon harbors, the Spanish actively encouraged long-term settlement and development of their northern frontier.

In addition to establishing communities to thwart rival imperial claims in the region, the Spanish crown was likewise interested in evangelizing those whom they encountered. Knowing that Alta California contained large numbers of indigenous persons, but also aware that there were few of the concentrations found in the urban centers of Mexico, Spanish authorities relied on a tried-and-true solution to this perceived problem. Rather than sending missionaries out to the scattered indigenous communities, the natives were brought together in common locales to be educated, Christianized, and perhaps most important, put to work. The mission system, conceived by high-ranking church and state officials, first implemented in Sonora in the sixteenth century, and most commonly associated with Father Junipero Serra, remains a hotly debated and contested aspect of Spanish colonial history.²⁵

With these dual motivations in mind—establishing bulkheads against competing claimants and creating missions—Governor of Baja California Gaspar de Portolá, a nobleman with a distinguished military record, was ordered by his home government to “send an

23 Adele Ogden, “Russian Sea-Otter and Seal Hunting on the California Coast, 1803–1841,” in *The Russians in California* (San Francisco: California Historical Society, 1933). On the Russian American Company and its activities in California, consult James R. Gibson, *Imperial Russia in Frontier America*, (New York: Oxford University Press, 1976). See also Hector Chevigny, *Russian America: The Great Alaskan Venture, 1741–1867* (New York: Viking Press, 1965); and Ilya Vinkovetsky, *Russian America: An Overseas Colony of a Continental Empire, 1804–1867* (New York: Oxford University Press, 2011).

Excellent first-person accounts can be found in Richard Pierce, *The Russian-American Company: Correspondence of the Governors* (Fairbanks, AK: Limestone Press, 1984); P. A. Tikhmenev, *A History of the Russian-American Company* (Seattle: University of Washington Press, 1977); and Basil Dmytryshyn and E. A. P. Crownhart-Vaughn, eds., *Colonial Russian America: Kyrill T. Khlebnikov's Reports, 1817–1832* (Portland: Oregon Historical Society, 1976).

24 On Fort Ross, see James Allan, “Fort Ross Cove: Historical and Archaeological Research to Identify the Remains of California's First Shipyard” (master's thesis, East Carolina University, 1996). See also James M. Allan, “Forge and Falseworks: An Archaeological Investigation of the Russian-American Company's Industrial Complex at Colony Ross” (PhD diss., University of California, Berkeley, 2001).

25 See, for example, H. Henrietta Stockel, *Salvation through Slavery: Chiricahua Apaches and Priests on the Spanish Colonial Frontier* (Albuquerque: University of New Mexico Press, 2008); and Ramon A. Gutierrez, *When Jesus Came the Corn Mothers Went Away: Marriage, Sexuality and Power in New Mexico, 1500–1846* (Palo Alto, CA: Stanford University Press, 1991).

expedition by sea to rediscover the people and bays of San Diego and Monterey.”²⁶ In January 1769, a trio of ships departed from various Mexican ports in a staggered schedule: *San Carlos* departed La Paz on January 9; two days later, *San Antonio* departed from San Lucas, and soon thereafter, *San Jose* left from Loreto, which was to be the base of military and pastoral operations for the expedition. It was agreed that an overland expedition, composed of two columns, one of which was led by Portolá and Serra, should be dispatched as an adjunct to these maritime forays. The Portolá column left Loreto on May 15, nearly two months after the first overland company—headed by Captain Fernando de Rivera y Moncada and accompanied by Padre Juan Crespí (who, like Serra, was a native of the island of Majorca)—marched north from Santa Maria in Baja California. An earlier overland expedition, led by Father Marcos across the Sonoran desert in 1539, proved that San Diego Bay could be reached in such a manner.

The journey up the Pacific coast of Baja California was as slow and arduous as had been Cabrillo’s two centuries earlier. Facing adverse winds and sailing into a prevailing current, the first ship to arrive, *San Antonio* under Captain Juan Perez, did not reach San Diego Bay until April 11. *San Carlos* was in even worse shape: by the time that ship arrived on April 29, the crew was so ravaged by scurvy that they could not launch their boats.²⁷ The overland trek was scarcely any better: the first detachment arrived on May 15 and the parched Portolá/Serra contingent arrived six weeks later. By this time, only half of the original three hundred members survived, and many more languished and died awaiting supplies and reinforcements from Baja California. After some much needed rest, the mission of San Diego was established on July 16, 1769, marking the first of twenty-one establishments, each located along the coast one day’s ride from the next. Legend has it that the abundant wildflowers now seen along the California coast—particularly the orange poppy and yellow mustard—were planted by itinerant friars as a sort of roadmap for their followers: recognizing their reliance on the coast, only one of the original twenty-one missions (Nuestra Señora de la Soledad) was located more than thirty miles inland from that lifeline.

In September, after establishing a presidio to protect the nascent settlement at San Diego, Portolá pushed on, but missed his appointed rendezvous with the relief ship *San Jose* at Monterey.²⁸ Believing that this barely adequate and windswept port could not possibly be the spacious anchorage that Vizcaíno had described, he continued his search for the “harbor protected from all winds,” carrying a dozen of his scurvy-stricken men on improvised litters. (In fact, the mission and settlement at Monterey would not be established until June 3, 1770.) Venturing farther north along the coast, the expedition strove to reach the Punta de los Reyes (an estuary had been charted here in 1734 by Admiral Cabrera Bueno on his return voyage from Manila).

On October 31, Portolá sent a hunting party ahead; a few days later, they crested a mountain in the Coast Range and encountered “some immense arms of the sea which

26 Mark Allan, “‘So Extended and Painful a Voyage’: A Narrative of the 1769 Journey of the *San Carlos* to San Diego Bay,” *Mains’l Haul: A Journal of Pacific Maritime History* 36, no. 1 (2000): 4-13.

27 “Pedro Font and Miguel Costanso: Two Early Letters from San Diego in 1769,” *Journal of San Diego History* (Spring 1975), <http://www.sandiegohistory.org/journal/75spring/fages.htm>. See also Harlan Hague, *The Road to California: The Search for a Southern Overland Route, 1540–1848* (Glendale, CA: The Arthur H. Clark Company, 1978).

28 Zoeth Eldredge, *The March of Portola and the Discovery of San Francisco Bay* (San Francisco: Kessinger Publishing, 1909).

penetrate into the mainland in an extraordinary fashion, as far as the eye could see, and which would have made it necessary to take a long, circuitous detour.”²⁹ What Sergeant José Ortega saw on this reconnaissance and described by Father Juan Crespi as “big enough to offer anchorages to all the navies of Spain and all the armadas of Europe,” were the southern reaches of San Francisco Bay.³⁰ Long hidden from mariners (three Spanish expeditions between 1542 and 1602 had sailed past the entrance to the harbor, as had Drake and unknown others), the harbor that many had passed but none had entered was finally revealed to the Spanish by an overland expedition.

As the first non-Indians to set foot in the region and explore its surroundings, the Portolá expedition was greeted with apprehension by local Ohlone tribesmen. The party grew depressed by the bay, seeing it as an obstacle to reaching the relief ship they still sought and which—from the signs of the Indians—they assumed must be anchored in an estuary above the bay. In reality, *San Jose* had wrecked months before off Baja California, and there was no ship within one thousand miles. When their supplies ran low, the dejected party retreated toward San Diego, leaving in their wake “la Boca del Puerto” (mouth of the port).

In 1772, Lieutenant Pedro Fages and Crespi made a more extended exploration of the eastern shore of San Francisco Bay, proceeding as far north as the San Joaquin-Sacramento Delta.³¹ As a record of this expedition we have a map, made from the diary and observations of Crespi, identifying for the first time many of the geographical features of the bay, including its islands, its environs, and its outlet through the straits into the Pacific Ocean.³² When the Spaniards met the Ohlone on the Fremont plain, south of Alameda Creek, Fages painted a scene reminiscent of early colonial New England:

We saw many friendly, good-humored heathens to whom we made a present of some strings of beads, and they responded with feathers and geese stuffed with grass, which they avail themselves of to take countless numbers of these birds. . . . We came to a place near the salt flats where there was a great willow thicket on a slough adjoining the estuary. . . . Here are found villages, whose inhabitants . . . without us asking, told us that the land flooded where we were, that on the other side the land shows itself to be rich, and that one can work most of these plains without iron. . . . There were five villages, each with six houses of spherical shape, with considerable numbers of heathens living in them.³³

Fages got as far as the Carquinez Straits of San Pablo Bay, while another expedition, led by Captain Fernando Javier Rivera y Moncada, the military governor of California, marched

29 Cited in K. Malletto, *The Discovery of San Francisco Bay: (1542–1769)*, http://www.foundsf.org/index.php?title=The_Discovery_of_San_Francisco_Bay http://www.foundsf.org/index.php?title=The_Discovery_of_San_Francisco_Bay.

30 Clyde F. Trudell, “Ayala and the *San Carlos*,” *Pacific Historian* 22, no. 4 (Winter 1978): 371–78.

31 As late as 1773, there were fewer than 100 Spanish residents in all of Alta California. The non-Indian population of the region had not passed 2,000 as late as 1800.

32 See Theodore E. Treutlein, *San Francisco Bay: Discovery and Colonization, 1769–1776* (San Francisco: California Historical Society, 1968).

33 Zoeth Skinner Eldredge, *The Beginnings of San Francisco from the Expedition of Anza, 1774 to the City Charter of April 15, 1850, with Biographical and Other Notes* (New York: John C. Rankin Company, 1912).

north from the peninsula to Point Lobos. Soon, a small vessel would sail through the Golden Gate, ushering in a period of maritime activity that would define San Francisco for the rest of its history.

On March 16, 1775, a fleet of four vessels prepared to sail from San Blas. *San Antonio* was bound for San Diego with supplies for the community there, while the flagship frigate *Santiago*, commanded by Captain Bruno Heceta, and *Sonora*, commanded by Lieutenant Juan Manuel de Ayala, were to explore the Northwest coast. The final ship, the 193-ton packet-boat *San Carlos*, a small craft of just 58 feet and a crew of thirty (plus a chaplain, Vicente Santa Maria), was commanded by Captain Manuel Manrique and ordered to survey the recently discovered San Francisco Bay.³⁴ Before they could sail, distress signals from *San Carlos* brought a boat from the flagship: it returned with news that Manrique had gone insane and was threatening his crew with a gun. After putting the deranged captain ashore, the thirty-year-old Ayala assumed command, but the drama was not over; while straightening up his cabin, removing loaded firearms his predecessor had left about, a musket discharged, the ball lodging itself in the new captain's foot. It took the tiny craft 100 days to reach Monterey, where they filled their water casks and made for the final leg of their journey, departing for San Francisco on July 27. A little more than a week later, on August 2, they arrived at the Golden Gate, and Ayala dispatched first mate José Canizares and a contingent of ten sailors in a longboat to assay the situation, probe the entrance, and find a suitable anchorage for the ship. When this group did not return, *San Carlos* attempted to enter the bay, but an ebb tide and the setting sun prevented them from making much headway.³⁵

San Carlos, sometimes known as the “*Mayflower* of the West,” was built in 1767 and launched from the Rio Santiago as *Toison de Oro*, or *Golden Fleece*.³⁶ Given her role in San Francisco's history, this name could not have been more foretelling. The next morning, she ghosted through the entrance, anchoring off Sausalito (a place they named for the small band of willow trees, or *sauzalito*, seen there), near present-day Tiburon, becoming the first European ship to sail into San Francisco Bay. Recognizing the unprotected location of their anchorage, Ayala moved the ship to Hospital Cove (since renamed Ayala Cove) on what they called “Isla de Nuestra Sonora de Los Angeles” (Angel Island).

The tiny ship was tasked with a monumental responsibility: survey the waters of San Francisco Bay and determine if the region was capable of sustaining a settlement large enough to thwart rival claimants. In the following weeks, a pair of intrepid pilots, José Canizares and Juan Batista Aguirre, thoroughly charted the entire bay, locating nearly five hundred soundings on a chart in a remarkable forty-four-day period of activity. The crew made prescient observations and gave names to prominent landmarks to assist future mariners (some of those which remain include Angel Island, Alcatraz [*alcaltraces*]—so named due to the large numbers of pelicans roosting there—and Yerba Buena Island), exploring a number of rivers to at least the juncture of the San Joaquin (determining that neither the

34 Both Ayala and Manrique had been trained in navigation, chart making, and coastal surveying.

35 Ayala reported the challenge of navigating the narrow harbor entrance: “At the entranceway to this harbor, we could make no more than half a knot . . . inside but a league, and a mile from shore, the winds were still.” Quoted in John Galvin, ed., *The First Spanish Entry into San Francisco Bay, 1775* (San Francisco: John Howell Press, 1971).

36 Cited in Edward O'Day, “The Founding of San Francisco,” ca. 1926, <http://www.sfmuseum.org/hist6/founding.html>.

Petaluma nor Corte Madera were estuaries from the sea).³⁷ By September 7, all points of the bay were thoroughly investigated and charted and the ship departed just four days later. However, the same tides and currents that prevented *San Carlos* from following her launch into the bay now caused trouble as she tried to leave; striking a rock at Lime Point on the north shore and damaging the rudder. The captain maneuvered the craft into Horseshoe Bay to repair the rudder, and she finally cleared the Golden Gate on September 18, en route to Monterey. Upon his return to San Blas, Ayala reported that the harbor he surveyed was indeed one of the finest he had observed: "This is certainly a fine harbor: it presents on sight a beautiful fitness, and it has no lack of good drinking water and plenty of firewood and ballast. Its climate, though cold, is altogether healthful and it is free from such troublesome daily fogs as there are at Monterey, since these scarcely come to its mouth and inside there are very clear days. It is the best harbor I have seen on this coast north of Cape Horn."³⁸

Armed with this favorable report, a party was dispatched north in 1775 and Spanish settlement of San Francisco began the following year. In the spring of the auspicious year 1776, when Captain Cook first visited the Sandwich (Hawaiian) Islands and a small band of upstart Americans declared their independence from Great Britain, Don Juan Batista de Anza led a ragtag band of 30 militiamen and 240 Mexican immigrants overland 1,500 miles to Monterey. These he left behind as he scouted ahead to find the best site on which to plant a colony on San Francisco Bay, eventually moving to the sandy northernmost tip of the peninsula that now marks the southern terminus of the Golden Gate Bridge. Pedro Font, a member of the party, recalled what they encountered on the site that the commander designated for the new settlement and fort:

We saw a prodigy of nature that is not easy to describe . . . the port is a marvel of nature, and might well be called the harbor of harbors . . . this mesa affords a most delightful view, for from it one sees a large part of the port and its islands, as far as the other side, the mouth of the harbor, and of the sea all that the sight can take in as far as beyond the Farallones . . . although in my travels I saw very good sites and beautiful country, I saw none which pleased me as much as this. And I think that if it could be well settled like Europe, there would not be anything more beautiful in all the world—for it has all the best advantages for founding in it a most beautiful city, for it has all the conveniences desired, by land as well as by sea, with that harbor so remarkable and so spacious that in it may be established shipyards, docks, and anything that might be wanted.³⁹

Arriving in March, they were greeted with understandable apprehension by the resident native peoples: by the end of the Spanish-Mexican period, the indigenous population of California would drop by more than half, as exposure to disease, slavish working conditions, and constant warfare eroded native communities. The hosts, nonetheless,

37 The names of Alcatraz and Yerba Buena Islands would be forever reversed by British mariner Frederick William Beechey during his surveying expedition of the region in 1826.

38 Zoeth Eldredge and Eusebius Joseph Molera, eds., *The Log of the San Carlos* (San Francisco: California Promotion Committee, 1909).

39 Frederick J. Teggart, ed., *The Anza Expedition of 1775: Diary of Pedro Font* (Berkeley: University of California Press, 1913). See also Alan K. Brown, ed., *With Anza to California: 1775–1776: The Diary of Pedro Font, O.F.M.* (Norman, OK: The Arthur H. Clark Company, 2011).

were gracious enough to show the newcomers how to survive in this location, with one Spaniard commenting that the natives were “like lambs, showing no signs of hostility.”⁴⁰

Aided by this information, the newcomers built adobe houses, laid out farms, and constructed a garrison to protect their holdings. The presidio that they established featured a small battery of guns (near today’s Fort Point) to announce the Spanish presence and defend their claim against would-be interlopers. (The ship *Columbia*, out of Boston, for example, would be seen later that year loading sea otters along the coast, bound for Canton. The defenders heated the cannonballs red-hot to shoot at the ship lest she dare enter the port. She did not.)⁴¹ Lieutenant José Joaquín Moraga, who led the settlers north from Monterey upon Anza’s return to Mexico, established military fortifications, erecting barracks and clearing a parade ground by September 17, 1776. Further inland, on October 8, they laid out a mission, San Francisco de Asís (commonly referred to as Mission Dolores, since it was positioned near a creek named Laguna de Nuestra Señora de los Dolores, itself allegedly named in recognition of the weeping natives who watched the construction process) to cater to the needs of the Catholic Church.⁴² A second establishment, Mission Santa Clara, was established in January 1777 on South Bay lands occupied by Ohlone natives.⁴³

Despite these advantages and glowing reports, for more than seventy years, San Francisco remained little more than a sleepy colonial outpost of the far northern stretches of New Spain; a barren stretch of sand dunes and windswept, rocky hills, covered with brush, and broken up here and there by wooded valleys or by swamps and tidal lagoons. Annual relief ships, such as the frigate *Aranzazu*, ostensibly sent from San Blas shuttled supplies to the California missions while returning to Mexico with items produced by native laborers. More often than not, the ships failed to arrive.⁴⁴ Indeed the relative lack of contact with the administrative centers of Sonora (caused in part by a series of Indian uprisings that precluded any meaningful relationships between Alta and Baja California) led to a remarkably isolated settlement. Occupied mainly by the military during these times, the few civilian settlers eked out an existence by carrying out sporadic trade in hides and tallow, or by capturing and marketing seal and sea otter pelts. During the forty-five years of Spanish rule, the arrival of more than three or four ships a year was a novelty, and local navigation was virtually nonexistent. The two small schooners procured by the missions at San Francisco and San Jose from the Russians at Fort Ross were so ill-used

40 Cited in O’Day, “The Founding of San Francisco.”

41 Construction of a more imposing edifice, Castillo de San Joaquín de La Punta de Cantil Blanco was completed in 1794, following the worrisome visit of George Vancouver and a subsequent state of hostility between Spain and England. Erwin N. Thompson, *Seacoast Fortifications: San Francisco Harbor* (Denver: National Park Service, 1979).

42 For a good first-person account of the founding of Mission Dolores, see Francisco Palou, “The Founding of the Presidio and Mission of Our Father Saint Francis,” *California Historical Quarterly* 14, no. 2 (1935): 102–8. See also “Moraga’s Account of the Founding of San Francisco, 1776,” in Herbert Eugene Bolton, *Anza’s California Expeditions*, Vol. 3 (Berkeley: University of California Press, 1930).

43 The area of this mission was near the local Ohlone village of Thamien, and the first civil settlement in California, the Pueblo de San José de Guadalupe. Spanish colonial policy led to the establishment of twenty religious settlements (missions) as well as a handful of civil settlements (pueblos at San Jose, Los Angeles, and Santa Cruz) and military encampments (presidios at San Diego, Santa Barbara, Monterey, and San Francisco).

44 See William Heath Davis, *Seventy-Five Years in San Francisco*, ed. Douglas S. Watson (San Francisco: John Howell, 1929).

that they were scrapped.⁴⁵

As the nineteenth century progressed, the community slowly developed. In addition to the mission and the presidio, a commercial center sprouted up along the shores of Yerba Buena Cove. The first wooden structure—a clapboard house constructed by Englishman William Antonio Richardson, who arrived in the city after sailing as mate aboard the British whaler *Orion* in 1822—was not constructed until 1835.⁴⁶ That same year, this former carpenter, who taught such skills as navigation and boatbuilding to mission Indians at the presidio, inaugurated a launch on the bay to ferry goods from ships lying at anchor in the port, thereby establishing the community as a commercial center.⁴⁷ Impressed by the variety of flora and fauna in the region—everything from marine mammals to an extensive array of wildflowers and naturally occurring edible plants—the settlers deigned their community “Yerba Buena” (literally, “good herb”).⁴⁸

William A. Richardson

William Anthony Richardson was one of the most colorful and illustrious individuals to inhabit early San Francisco. Born in England in 1795, Richardson was an active mariner who arrived in Yerba Buena aboard the British whaler *Orion* in 1822. As one of the first residents of that town following Mexican independence, he was an important presence in the city’s formative years. Becoming a Mexican citizen in 1825, Richardson further cemented his place in society by wedding the daughter of the presidio’s comandante. The nuptials, performed at Mission Dolores, represented the first notable Anglo-Spanish union in California.

Richardson was granted a sizable estate in the East Bay and an even larger estate in neighboring Marin County. He developed the Marin property around a freshwater spring from which he drew water that he sold to visiting ships, which came to favor the anchorage of Sausalito over those previously sought out on Angel Island and in present-day San Francisco.

With the encouragement of the Mexican government, Richardson established the pueblo of Yerba Buena, which would later become the city of San Francisco. He was named “Captain of the Port of San Francisco,” and operated a launch service from his tiny enclave. He is said to have instructed local natives in boatbuilding, carpentry, and navigation, and was routinely called on to pilot visiting ships into and out of San Francisco Bay.

Richardson died in 1856, having seen the small outpost he helped found transform into a bustling commercial entrepôt. Sausalito’s Richardson Bay is named in his honor.

Richardson had originally based his operations in Sausalito, where he supplied wood

45 Bancroft lists 128 vessels along the California coast at one time or another in the half decade from 1825 to 1830, and 99 in the following five years. Roger Olmsted, *San Francisco Waterfront: Report on Historical Cultural Resources for the North Shore and Channel Outfalls Consolidation Projects*, prepared for the San Francisco Wastewater Management Program, 1977.

46 When Richardson arrived in 1822, there was no commercial center, only the Presidio and the Mission. His dwelling would be the start of the pueblo of Yerba Buena, and later the city of San Francisco.

47 John B. McGloin, “William A. Richardson, Founder and First Resident of Yerba Buena,” *Journal of the West* (October 1966): 493–503. See also Robert Ryal Miller, *Captain Richardson: Sailor, Ranchero, and Founder of San Francisco* (Berkeley: La Loma Press, 1995).

48 The shallow, protected anchorage at Yerba Buena Cove, out of reach of the tides and winds that plagued generations of mariners, was situated between Telegraph Hill and Rincon Point, approximately where the San Francisco-Oakland Bay Bridge now enters the city and not far from present day Portsmouth Square.

and water to the many whalers that called at the bay (in fact, the anchorage now known as Richardson's Bay was previously referred to as "Whaleman's Bay" after those craft, which previously called at Yerba Buena island, became frustrated with the difficult-to-access fresh-water springs and moved to Sausalito for refitting); of the twenty vessels known to have been on the coast in 1835, 30 percent were whalers.⁴⁹ That same year, Richardson, who married the daughter of the presidio comandante, was appointed "captain of the port" by Governor José Figueroa (though there were relatively few arrivals per annum documented during this period). An American, Jacob P. Leese, opened the first general goods store the following year; bankrolled by Monterey businessmen William Hinckley and Nathan Spear, the structure would soon be leased to merchant William Rae of the Hudson Bay Company. In keeping with the multinational aspect that remained a hallmark of the city from this early stage, Swiss immigrant Jean Jacques Vioget made the first attempts to lay out the city's streets.⁵⁰ The town was laid out on a grid, ready for trade and commercial intercourse, with all its activities centered on the bay. Despite the modest dimensions of Yerba Buena cove—1 mile wide and with exceedingly shallow water—its potential was not lost on early observers.

Protected from the strong and continuous westerlies of summer and vastly safer during the gales of winter, the anchorage seemed preordained for greatness. As one visitor commented, the site was clearly destined to be a major maritime mercantile town: "There is no doubt that San Francisco will be the great commercial point of California, on account of its great internal resources and the extent and security of its harbor."⁵¹ By 1839, entrepreneur James Hinckley arrived via the ship *Corsair*, which delivered a mule-powered gristmill to his lot on what is now Clay Street between Montgomery and Kearney, thereby establishing the first manufacturing plant in the city.⁵² It was a sign of things to come. As historian James Delgado eloquently explains:

The development of the waterfront defined early San Francisco economically as well as physically, generating an urban, commercial and mercantile core that allowed its developers and inhabitants to thrive in the face of competition and prosper despite the lack of available land, boom-and-bust economic cycles, and a series of destructive fires. The founders of San Francisco were capitalists gambling on San Francisco's becoming a point of transshipment.⁵³

49 The first whale taken in Pacific waters was captured by Mate Achelus Hammond and his crew of Nantucket islanders aboard the British ship *Amelia* in 1788. News quickly filtered back to New England, where first Nantucketers, and then New Bedfordites dominated the trade, with headquarters in Lahaina and a range throughout the South Seas.

50 The northern frontier of Mexico was an extraordinarily diverse community, as the presence of whites and blacks among the Anza expedition shows. To add to the multicultural aspect of the community, the first Chinese residents could be traced to a trio of immigrants—a woman and two men—who arrived aboard the ship *Bolivar* in 1838. "Forgotten Ships of the 1850s," J. Porter Shaw Library MS collection, 1244A. As late as 1840, there were perhaps 50 residents of Yerba Buena, of whom nearly one-third (16) were not Mexican. Vioget had arrived in 1837 as master of the Ecuadorian brig *Delmira*.

51 Yerba Buena cove was not without its flaws. Shallow, with sand dunes abutting the property, it was little more than a large expanse of mud flats at low tide. Indeed, the presence of steep hills and wide tidal mud flats seemed to militate against it becoming the great port on the Bay. It was the presence of aggressive, active merchants that made all the difference.

52 John H. Hittell, *A History of the City of San Francisco and Incidentally of the State of California* (San Francisco: A. L. Bancroft and Company, 1878), 92–97.

53 James P. Delgado, *GoldRushPort: The Maritime Archaeology of San Francisco* (Berkeley: University of California Press, 2009), 7.

Still, the sluggish community languished. The forts were in ruins and not a single gun was mounted at the time of Wilkes' 1837 visit. Josiah Belden described the settlement in 1841 as "simply a landing place, where vessels came in to lie and ship hides and deliver goods. There were some fifteen to twenty houses of all kinds in the place, mostly small shanties . . . the people were perhaps half Californian, half foreigners."⁵⁴

By 1844, the small community had grown to twenty dwellings, including a trading outpost of the Hudson's Bay Company, several grocery stores, and a pair of grog shops that served the crew of merchant vessels and whaleships that preferred the sheltered anchorage at Yerba Buena cove to the exposed anchorages of the presidio. Before the discovery of gold in 1848, the bay furnished few inducements for traders to visit.⁵⁵

Nonetheless, as the number of ships calling at the cove increased, the Mexican government took notice, inaugurating a customs house on the site in 1844. Soon enough, the need for orderly settlement would be self-evident as the discovery of gold in the Sierra foothills enticed the world to rush to San Francisco. Before dealing with that chapter in California's maritime history, however, other events must first command our attention.

54 Belden, born in Connecticut, was a member of the first planned emigrant party to cross the plains to California. Arriving in California in November 1841, he settled first in Santa Cruz, where he managed a store for Thomas O. Larkin, and he later operated a small store in Monterey (Josiah Belden Papers, 1832–1903, Bancroft Library).

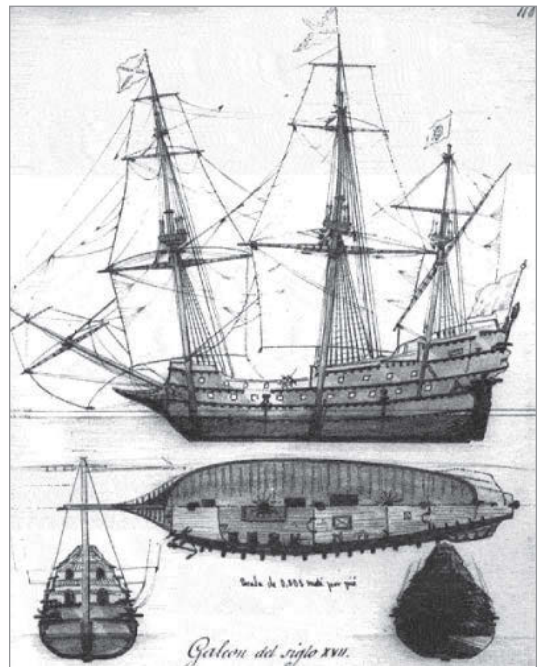
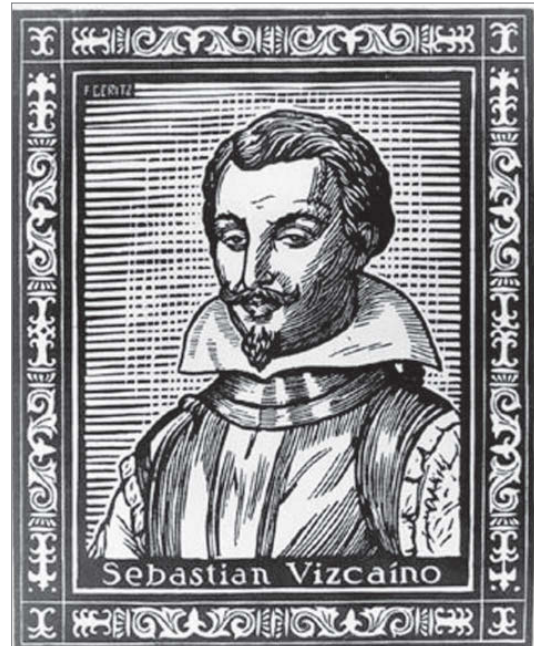
55 In early 1846, there were but 30 houses in Yerba Buena. By June 1847, this number had grown to roughly 180 houses, with an aggregate of 459 residents. Of these, 228 were American, 34 were indigenous persons, and 32 were Spanish or Mexican.

Anton Refregier's depiction of the "discovery" of San Francisco Bay graces the walls of the city's Rincon Building. The building's twenty-three murals depict various aspects of San Francisco history, many of which have a maritime theme.



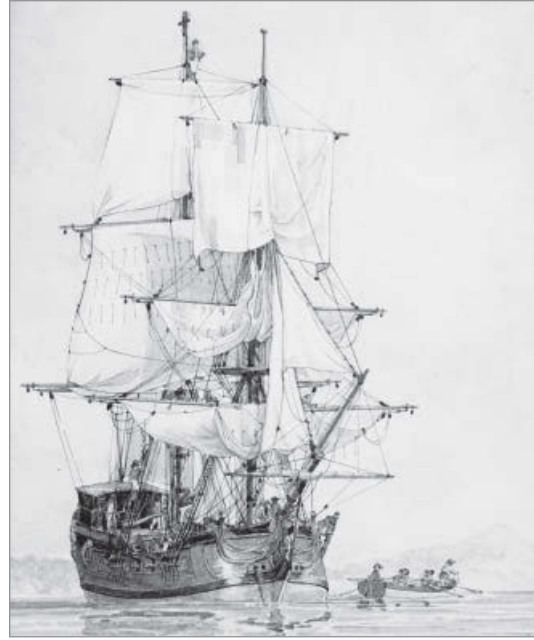
Courtesy Paul Judge.

Among the many Spanish sailors who reconnoitered the California coast, few had as lasting an influence as Sebastián Vizcaíno. Here he is depicted by Enrico Martinez in 1603. A typical galleon of the period is shown to the right.



Courtesy San Diego History Center.

An artistic representation of San Carlos on approach to San Francisco Bay, being greeted by local indigenes in traditional watercraft.



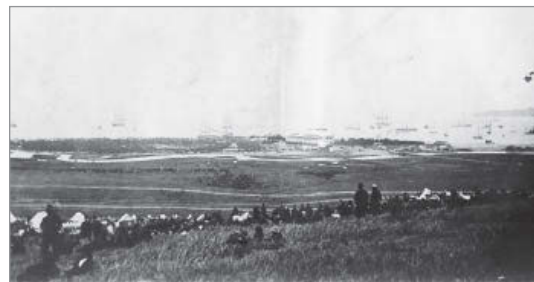
Watercolor by William Gilkerson, courtesy San Francisco Maritime National Historical Park. A6.36903n.

One of the more fascinating figures in early San Francisco was William A. Richardson, depicted here in an 1845 daguerreotype. By this late stage in his life, Richardson had risen to considerable status and amassed huge landholdings in the region.



Courtesy Lucretia Hanson Little History Room, Mill Valley Public Library.

The presidio was established by imperial Spain to guard the nascent community of Yerba Buena and the approaches to San Francisco Bay. It maintained this role throughout its existence. Here, a mock battle takes place on the grounds in the aftermath of the Spanish American War.



Courtesy San Francisco Maritime National Historical Park, A11. 17, 382 pl.

CHAPTER 4

CONTESTS: MEXICAN, ENGLISH, RUSSIAN, AND AMERICAN

Situated on the fringes of Spanish America, Alta California received scant attention from colonial officials focused on what appeared to be more resource-laden portions of their empire. Moreover, the small size of the population in this region, scattered along several hundred miles of coastline, made enforcing imperial prescripts more trouble than it was worth. As such, during much of the Spanish colonial period in California (1769–1821), laws aimed at enforcing trade restrictions and other regulations often appeared on the books but were seldom enforced. This happy half century of “salutary neglect” encouraged a growing independence on the part of early settlers in California, while opening the door for competing powers to thrust themselves into the administrative void.

Like all imperial powers, Spain held to the economic policy known as *mercantilism*. In this system, colonies were deemed important for a variety of reasons, most notably as sources of raw materials and as protected markets for domestic producers. Under mercantilism, states should do everything in their power to monopolize trade with their colonies; above all, outsiders should be denied access to the rich resources and consumers that could be found in colonial holdings. Under these conditions, states build up a favorable balance of trade, exchanging surplus items with other nations for goods to which they themselves had little access. The goal, clearly, was economic self-sufficiency and control of international trade. As one contemporary axiom stated, “he who controls trade, controls the world itself.”¹ In addition to closing access to colonial markets, imperial states forbade their colonists from engaging in trade and commerce with other nations, and, in an attempt to force colonial consumers to purchase manufactured items directly from the industrialized mother country, tried desperately to limit colonial industry. The carrying trade between mother country and colony was likewise dominated by the controlling nation: one of the last things an imperial country wanted was forced reliance on a third party to fetch and haul items from various parts of its own empire, which cut appreciably into the profit margin and flew in the face of self-sufficiency.

Throughout most of Spain’s holdings, mercantilism was practiced in a highly scripted manner. Raw materials—such as gold or silver from the mines in Central and South America—were collected in New World ports and then sent to Spain or Manila, where they were exchanged for manufactured items that eventually made their way back to the Americas. The most famous legs of these exchange routes involved the aforementioned Manila galleons, linking the Philippines to Mexican Pacific ports, but there were similar runs from Caribbean ports to Spain, all controlled by merchants and financiers based in Seville. When the precious metals at Potosi or other American mines were exhausted, New World markets responded by supplying agricultural products—from corn and wine to leather and beef—to Spain. The sparsely populated regions of Alta California, long seen as an unprofitable region best suited for use as a forward camp aimed at keeping imperial rivals at

1 Walter Raleigh, *Discourse on the Invention of Ships . . . The Works of Sir Walter Raleigh*, vol. 8 (http://books.google.com/books?vid=OCLC02477824&id=JlNIWfc2XV4C&pg=PA317&as_brr=1#v=onepage&q&f=false), 325.

bay, did not really fit into this scheme. At this time, none were aware of the tremendous gold deposits located in the Sierra Nevada, and the small population, even when aided by mission Indian conscripts, could not harvest enough crops to warrant imperial attention. Moreover, the distance between the seat of colonial government and this outlying region made enforcing mercantilist proscriptions difficult and expensive; soon, local merchants and entrepreneurs recognized that they could engage in surreptitious commerce with other nations at very little risk, and with much potential profit. Hides and tallow were the primary California exports, while all varieties of manufactured goods made their way to the isolated Spanish outposts.² This clandestine and illicit trade between Spanish colonial (and later, Mexican) California and English, Russian, and, especially, American merchants marked the years between the end of the American War of Independence and the start of the gold rush.

During this period, the largest threat to Spanish interests in California seemed to come from the British. Ever since Francis Drake laid claim to Nova Albion, the British had cast covetous eyes on the Pacific coast of North America. Most of their attention focused north of the current border of California, centered on the trapping and trading activities of the Hudson's Bay Company holdings in present-day British Columbia.³ The trio of Nootka Sound conventions, articulated between Great Britain and Spain on Vancouver Island between 1790 and 1794 essentially allowed English (and Russian) domination north of 42° latitude, with the Spanish retaining suzerainty over the southern portion.⁴ Still, most observers were quick to point out that should they wish to extend their holdings, there was little that the Spanish could do to prevent English penetration into Alta California. The newly established San Francisco harbor was an attractive target, but it was not their only area of interest, as evidenced by the 1792–1793 visit of HMS *Discovery*, captained by George Vancouver (recently off his reconnaissance of the Columbia River), to the communities of San Diego, Monterey, and Yerba Buena.⁵

Still, San Francisco held special promise. Sailing into the port on a mid-November night, guided only by a fire on the beach, Vancouver was puzzled—and somewhat disgusted—by the absence of lights in the Spanish town.⁶ During his eleven-day stay in San Francisco, Vancouver expressed amazement at the settlement's primitive state, echoing the

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- 2 Hides served as the basis for a leather-goods industry, while tallow, composed mainly of animal fats, could be worked in soaps, candles, and assorted useful products. See J. Wade Caruthers, "The Seaborne Frontier to California, 1796–1850," *American Neptune* (April 1969): 81–101.
 - 3 See Eric Jay Dolin, *Fur, Fortune, and Empire: The Epic History of the Fur Trade in America* (New York: W. W. Norton and Company, 2010); and Richard Somerset Mackie, *Trading beyond the Mountains: The British Fur Trade on the Pacific, 1793–1843* (Vancouver: University of British Columbia Press, 1997). An older treatment is Agnes Christine Laut, *Pioneers of the Pacific Coast: A Chronicle of Sea Rovers and Fur Hunters* (Glasgow: Brook and Company, 1915).
 - 4 Vivian Fisher, "Esteban Jose Martinez: A Naval Officer Who Steered Spain to the Edge of War in the Pacific Northwest," *Mains'l Haul: A Journal of Pacific Maritime History* 36, no. 1 (2000): 14–22. See also David J. Weber, *The Spanish Frontier in North America* (New Haven, CT: Yale University Press, 1994).
 - 5 Vancouver was in command of an expedition with two ships, HMS *Discovery* and HMS *Chatham*, and his mission was to survey the entire coast, with a focus on the Northwest and the region around the Straits of Juan de Fuca, to determine if it was a Pacific entry to the Northwest Passage. Vancouver detached a boat crew under the command of Lieutenant William Broughton to chart the Columbia when he learned of the discovery and entry into the river by the American ship *Columbia Rediviva*. See Robin Fisher and Gary Fiegehen, *Vancouver's Voyage: Charting the Northwest Coast, 1791–1795* (Vancouver and Toronto: Douglas and McIntyre, 1992).
 - 6 Arriving on November 14, 1792, *Discovery* was the first non-Spanish ship to call at San Francisco, though other foreign vessels had been to various ports in Alta California previously.

Eurocentric language of many of his contemporaries:

Instead of a country tolerably well inhabited and far advanced in cultivation—if we except its natural pastures, the flocks of sheep and herds of cattle—there is not an object to indicate the most remote connection with any European, or other civilized nation. The only object of human industry that presented itself was a square area whose sides were about 200 yards in length, enclosed by a mud wall, above whose tops could be seen the thatched roofs of low, small houses [this was the presidio].⁷

He also noted the unprotected condition of the harbor's entrance (a pair of dilapidated cannon), maintaining that the defense of California rested more on the ignorance of the world than on the strength of the Spanish. This was a shortcoming that the residents of San Francisco—aided by Indian laborers—sought to quickly address. Despite these poor first impressions, Vancouver recognized the value of the port, stating, "It is as fine a port as the world affords . . . and its possession ought to be a principal object of the Spanish crown," though he remained stunned that the community possessed only one "rotten wooden canoe" in addition to the native tule balsas.⁸ In 1812, a British man-of-war, HMS *Racoon*, dispatched from Great Britain to take possession of the American fur-trading post at Astoria during the recent hostilities between the two nations, visited San Francisco, leading many to surmise that the British were primed to take the port. Damaged at the Columbia River Bar, *Racoon* leaked all the way to San Francisco Bay, where the ship "careened between the island and the main" encountering trouble near Hospital Cove on Angel Island (hence the current Raccoon Straits).⁹

This did not put an end to British operations in the region: in 1826, the British made an extensive scientific survey of the approach from the sea, performing the first accurate hydrographic survey up to the waters of the Carquinez Strait.¹⁰ Aside from the oceanographic data recorded, Captain Frederick William Beechey, of the research vessel HMS *Blossom* repeated many of Vancouver's earlier sentiments:

It is true that this port is good, not only for the beautiful harmony that offers to the view, but because it does not lack very good fresh water, wood, and ballast in abundance . . . its climate, though cold, is healthful and free from those troublesome fogs which we had daily in Monterey. . . . It is a magnificent port . . . but does not show itself to advantage until after the presidio is passed, when it breaks upon the view, and forcibly impresses the spectator with the magnificence of the harbor. One beholds a broad sheet of water, sufficiently to contain all the British navy, with convenient coves, anchorage in every part, and a country diversified with hill and dale, partly wooded and partly disposed in pasture lands of the richest kinds, abounding in herds of cattle . . . no fault

7 Quoted in James Miller Guinn, *A History of California* (Los Angeles: Historic Record Company, 1915), 78.

8 George Vancouver, *A Voyage of Discovery to the North Pacific Ocean* (London: G. G. and J. Robonson, 1798), 9.

9 John Hussey, ed., *Voyage of the Racoon: A "Secret" Journal of a Visit to Oregon, California, and Hawaii, 1813–1814* (San Francisco: Book Club of California, 1958).

10 Following this, in 1837 the Royal Navy dispatched HMS *Sulphur* into the Lower Sacramento River to produce charts of that area. Published in 1839, these remain the oldest extant documents pertaining to that waterway.

can be found in its climate; its soil in general is fertile; it possesses forests of oak and pine convenient for building. It possesses almost all the requisites for a great naval establishment and is so advantageously situated with regard to North America and China—and the Pacific in general—that it will, no doubt, at some future time, be of great importance. . . . In short the only objects wanting to complete the scene are some useful establishments and comfortable residences on the grassy borders of the harbor, the absence of which creates an involuntary regret, that so fine a country, abounding in all that is essential to man, should be allowed to remain in such a state of neglect. So poorly did the place appear to be peopled, that a sickly column of smoke, rising from within some dilapidated walls, misnamed the presidio (or protection), was the only indication we had of the country being inhabited . . . an industrious population alone seems requisite to withdraw it from the obscurity in which it has so long slept under the indolence of the people and the jealous policy of the Spanish government, and the more we became acquainted with the beautiful country around San Francisco, the more we were convinced that it possessed every requisite to render it a valuable appendage to Mexico; and it was impossible to resist joining in the remark of Vancouver, “Why such an extent of territory should have been subjugated, and, after all the expense and labor bestowed upon its colonization, turned to no account whatever, is a mystery in the science of state policy not easily explained.” . . . This indifference cannot continue; for either it must disappear under the present authorities, or the country will fall under other hands, as from its situation with regard to other powers and to commerce . . . it is of too much importance to be permitted to remain longer in its present neglected state.¹¹

Notably, British interests in the region seemed to worry more about the United States than they did the Spanish or Mexicans.¹² In 1841, a decade and a half after Beechey’s survey, Sir George Simpson, ranking official of the Hudson’s Bay Company in North America, made prescient observations. Noting but a half dozen ships in the Bay, he commented that the

11 Alan Fraser Houston, “Cadwalader Ringold, US Navy: Gold Rush Surveyor of San Francisco Bay and Waters to Sacramento, 1849–1850,” *California History* 79, no. 4 (Winter 2000): 208–21. Ringgold was an officer on the Wilkes Expedition who had surveyed the Sacramento River in 1849. The following year, he returned to continue the task, this time for a group of private investors who paid for the first charts of San Francisco Bay and its approaches.

12 This was a time of fierce British-American competition, beginning with the American settlement of Astoria. British interests prevailed, owing to the activities of the Hudson’s Bay Company, which introduced coastal forts, traders, and a steam trading ship, *SS Beaver*, in 1836. The establishment of Fort Vancouver on the Columbia saw the gradual introduction of coastal traders with the arrival of ships like *William and Ann*, or *Cadboro*, which extended the trade up to the Alaskan border. During their time of operation, the Hudson’s Bay Company started the lumber trade, salmon trade, and regular commercial links with California, Hawaii, and Russian Alaska. See John McLoughlin and Burt Brown Barker, eds. *Letters of Dr. John McLaughlin, Written at Fort Vancouver, 1829–1832* (Portland: Oregon Historical Society, 1948). See also James P. Delgado, “The Bermuda Brig *William and Ann*: Fur Trading Pioneer on the Northwest Coast of America,” *Bermuda Journal of Archaeology and Maritime History* 8 (1996): 47–58, James P. Delgado, “*Isabella*: A Hudson’s Bay Company Shipwreck of 1830,” *American Neptune* 55, no. 4 (Fall 1995): 309–320.

cove of Yerba Buena was “destined to be the site of a flourishing town.”¹³ He was mortified at the lack of local navigation, and incredulous that natives’ balsas, “miserable and make-shift” were used to cross the inland waters, “being the only floating things found . . . from San Diego to San Francisco.” The Americans, he added, “if unchecked in California . . . will soon discover that as masters of the interior, they have a natural right to a maritime outlet . . . so that San Francisco, to a moral certainty, will sooner or later fall into the possession of the Americans, and the only possible mode of preventing such a result being the previous occupation of the port on the part of Great Britain.”¹⁴

The British, while the most loquacious of rivals, were not the only ones vexing Spain. Russian interest in the region was also strong: representatives from that country had long been entrenched in North America, and by the nineteenth century, they were preparing to sail south from their base in Sitka. In 1806, the first Russian ship to visit San Francisco, *Juno*, spent six weeks in the port.¹⁵ There, Russian agents acquired grain for the starving settlers of Russian Alaska (by this time, Mission Dolores alone was producing 4,000 bushels per year of wheat, corn, barley, and beans), while government agents ingratiated themselves with the local community, trading Siberian cloth and hardware for locally produced foodstuffs. This was the beginning of a long and cordial relationship between the city of San Francisco and the Russian people, marking the first of many notable visits on the part of Russian merchantmen or naval vessels to that city. (Indeed, Russian Hill in San Francisco is named in recognition of the final resting place of several members of that and subsequent expeditions interred on its northern slope.)

In his *Life in California, 1830–36*, Alfred Robinson reported that “at Yerba Buena we found a large Russian ship, from Sitka, which had come for a cargo of wheat and beef fat. . . . Mission San Jose frequently supplies the Russian Company who yearly send three of four large ships for stores for their Northern Settlements.”¹⁶ This was impressive, since another observer mentioned that there were but three mills among all the missions, and that these “were of the rudest possible character—a single stone attached directly to the upright shaft of a horizontal water-wheel.”¹⁷ Food was not all the Russians had in mind. Writing to his home government, Count Nicolai Petrovich Rezanov, Imperial Inspector of the Russian American Company and de facto leader of the expedition, reported: “Your Excellency perhaps will laugh at my far-reaching plans, but I am certain that they will prove exceedingly profitable ventures, and if we had men and means, even without any great sacrifice on the part of the treasury, all the country north of here could be made a corporeal part of the

13 The craft included the Russian brig *Constantine*, removing the last of the settlers from Fort Ross, the government schooner *California* (“which represented the entire line of battle of the California navy”), American brig *Alert*, British bark *Index*, and Mexican brigs *Catalina* and *Bolívar*. He listed sixteen ships along the coast, all engaged in the hide-and-tallow trade, despite the fact that any one could “make away with two-thirds the production of the region.” Quoted in John S. Galbraith, *The Hudson’s Bay Company as an Imperial Factor, 1821–1869* (Berkeley: University of California Press, 1957), 456.

14 In Joshua Paddison, ed., *A World Transformed: Firsthand Accounts of California before the Gold Rush* (Berkeley: Heyday Books, 1999), 256–57.

15 When the vessel arrived in San Francisco on April 8, nearly every man on board was showing the ravages of scurvy. Basil Dmytrshyn, E. A. P. Crownhart-Vaughn, and Thomas Vaughn, eds., *Russian Penetration of the North Pacific Ocean: To Siberia and Russian America, Three Centuries of Russian Eastward Expansion*, Vol. 1 (Portland: Oregon Historical Society Press, 1998).

16 Alfred Robinson, *Life in California* (San Francisco: William Dixon, 1897), 82.

17 Robinson, *Life in California*, 84.

Russian empire.”¹⁸

Georg von Langsdorff, a German naturalist who joined the expedition, was incredulous that “there was not a single boat in any of the missions . . . thus they are obliged to go around the bay rather than across it, a distance of some three times as long,” although this he attributed less to the indolence of the Spaniards (the conclusion reached by Vancouver two decades earlier) and more to a desire on the part of the friars to keep their neophytes from fleeing the missions.¹⁹ Perhaps to better see his plans come to fruition, Rezanov embarked on a whirlwind romance with the underage daughter of a local politico, much to the chagrin of her parents and the local padres. Reluctantly, Comandante José Dario Argüello agreed that his daughter, Concepción, could marry the count, but only if both the czar and pope agreed. Rezanov dutifully headed out to seek their permission, taking his cargo to Sitka before departing across the Siberian wasteland. After waiting thirty-five years, Concepción received word that her lover died en route. Hearing this she fainted, and upon awakening, entered a local convent where she spent the remainder of her years.²⁰

The reality of Russian interests on the Eastern Pacific was far less romantic. Motivated by a desire to collect sea otter pelts (and, failing that, skins of seals, beaver, or just about any other fur-bearing animal) agents of the Russian-American Company (who supplanted the independent entrepreneurs known as *promyshlenniki*) enlisted Aleut and Eskimo hunters to do their work for them. (The hunters had little say in the matter, since their families were often held for ransom pending delivery of a sufficient quantity of pelts.)²¹ After exhausting all supplies of locally available furs in the waters off Alaska, the Russians began systematically exterminating huge numbers of marine mammals farther down the Pacific coast.²²

By 1808, Russian traders were regularly seen in Bodega Bay, hunting otters and trading for pelts with locals. The following year, Ivan Kuskov and *Kodiak* returned to Sitka with 2,000 sea otter pelts.²³ The environmental impact was severe and immediate: when Kuskov returned aboard *Chirikof* in 1811, the population of otter had yet to rebound. Undeterred, he took nearly 1,200 otter from grounds farther afield, including a large number from the Farallones (where they would eventually establish a permanent sealing station that

18 Such schemes were not new to Rezanov. Born into a noble St. Petersburg family in 1746, he had spent his youth working as a diplomat in Siberia for Empress Catherine II. A founder of the Russian-American Company, he sponsored the first Russian circumnavigation of the globe, was imprisoned in Japan as part of that expedition, and envisioned Russian domination and annexation of the entire western shore of North America. The most complete biography of Rezanov remains Hector Chevigny, *Lost Empire: The Life and Adventures of Nikolai Rezanov* (New York: Macmillan Press, 1937).

19 “When such an occasion dictates water transport . . . they make a kind of boat of straw, reeds, and rushes, bound very compactly, so that they are able to go from one shore to the other” (Georg von Langsdorff, *Langsdorff’s Narrative of the Rezanov Voyage* [San Francisco: Thomas C. Russell, 1927]), 34.

20 For Rezanov, see Nikolai Petrovich Rezanov, *The Rezanov Voyage to Nueva California in 1806* (San Francisco: Thomas C. Russell, 1926).

21 James R. Gibson, *Imperial Russia in Frontier America: The Changing Geography of Russian America, 1784–1867* (New York: Oxford University Press, 1976).

22 The Russians were not the only ones active in the Arctic theatre. See John R. Bockstoe, *The Opening of the Maritime Fur Trade at Bering Strait: Americans and Russians meet the Kanighmiut in Kotzebue Sound*. Philadelphia: American Philosophical Society, 2005.

23 Leonid Shur, ed., *The Khlebnikov Archive: Unpublished Journal (1810–1837) and Travel Notes (1820, 1822, and 1824)* (Anchorage: University of Alaska Press, 1990). See R.A. Thompson, *The Russian Settlement in California Known as Fort Ross, Founded 1812 . . . Abandoned 1841: Why They Came and Why They Left* (Santa Rosa, CA: Sonoma Democrat Publishing Company, 1896).

supplied over 1,200 furs annually).²⁴ In 1812, much to the chagrin of Spanish authorities, the Russians established a settlement 90 miles north of San Francisco Bay, near the eponymous Russian River. Two years later, Spanish officials informed their new neighbors that these facilities at Fort Ross (whose carpets, piano, and glass windows must have compared favorably to the flea-infested sand dunes marking San Francisco at that time) violated Spanish laws and that they should abandon their post immediately. Yet the Russians remained, and half-hearted Spanish efforts to remove them were opposed by soldiers, settlers, and missionaries, who benefited from the presence of these furtive trading partners.²⁵ Aleutian Island natives, coerced into serving as fur hunters, were regularly seen carrying their kayaks to the bay, or hunting their prey along the north side of the Golden Gate, out of range of Spanish guns.²⁶ From these tepid starts a deeper relationship grew: in October 1816, the modest two-masted brig *Rurik* entered San Francisco as part of a scientific expedition led by the German-born Otto von Kotzebue.²⁷ At 180 tons, the tiny vessel had an impressive mission: launched from St. Petersburg in 1815, the vessel began an around-the-world trip with two stated goals—to explore the islands of the South Pacific and to locate a passage from Alaska to the Atlantic seaboard—and an unstated mandate: to intimidate Spanish officials into opening up relations between San Francisco and Alaska.

Fort Ross

Among the most vexing problems for Spain was competition from rival imperial powers. While the exploits of Sir Francis Drake are well known, representatives from tsarist Russia made an equally impressive challenge to Spanish hegemony. Fur-trading emissaries had steadily moved south from Russian Alaska, and by the eighteenth century, approached the infant settlement at Yerba Buena. With the consent of their home government, representatives of the Russian-American Company scouted out potential footholds along the northern California coast to base their fur-trapping and hunting activities. Following negotiations with local tribes, the Russians established Fort Ross in 1812. This marked the southernmost point of Russian expansion in North America and the largest concentration of Russian settlers south of Alaska. The base of their operations was a tiny establishment located in present-day Sonoma County, fifteen miles north of Bodega Bay. Known as Fort Rus, later anglicized to Fort Ross, the settlement served a dual role. As home base for otter hunters, it provided access to the rich hunting grounds of Bodega Bay, and provided food to sustain the larger Russian populations then active in Alaska.

The Russian settlement brought much advancement to Alta California. Fort Ross was home to the first windmills and shipyard in the region, producing four ships—Rumiantsev, Buldakov, Volga, and Kiahtha—and several longboats. Additionally, the Russian settlers introduced such refinements as glass windows. Scientists associated

24 Such ecological devastation was not, of course, limited to the Russians. Early American sealers, led by brothers Nathan and Jonathan Winship, included *Albatross*, *O'Cain*, *Mercury*, and *Isabella*. They took over 30,000 seals between 1809 and 1810. Peter White, *The Farallon Islands: Sentinels of the Golden Gate* (San Francisco: Scottwell Associates, 1995).

25 See Thompson, *The Russian Settlement in California Known as Fort Ross*.

26 Glenn Farris, "Otter Hunting by Alaskan Natives along the California Coast in the Early Nineteenth Century," *Mains'l Haul: A Journal of Pacific Maritime History* 43, nos. 3–4 (2003): 20–33. See also John Bockstoce, *Furs and Frontiers in the Far North: The Contest among Native and Foreign Nations for the Bering Strait Fur Trade* (New Haven, CT: Yale University Press, 2009).

27 August C. Mahr, *The Visit of the Rurik to San Francisco in 1816* (Stanford, CA: Stanford University Press, 1932).

with the community made many important observations about the local flora and fauna, including detailed ethnographic notes concerning the region's aboriginal inhabitants.

The compound consisted of a redwood fort that, though outfitted with heavy cannon and formidable defenses, was never tested by Spanish or natives. Other structures included a chapel, barracks, warehouses, and commanding officers' quarters. A tannery, brickworks, barns, and other utilitarian structures were nearby, and sixty dwellings, from modest adobe homes to more elaborate buildings. By 1841, however, sustained overhunting severely depleted the stocks of otter and fur-bearing animals, and the agricultural productivity of the land proved insufficient to meet the demands of the Russians farther north. The company abandoned the property, selling it to John Sutter for an estimated \$30,000. By the first decade of the twentieth century, ownership of Fort Ross had been transferred to the State of California. Less than a month after this transfer, the great San Francisco earthquake of 1906 inflicted substantial damage to the property. Restoration of the surviving structures began in 1916. Since that time, much money and effort have gone toward recreating the original setting of the colony, including detailed archaeological investigations that have led to an accurate portrayal of life in Russian California.

A designated National Historic Landmark, the property is listed on the National Register of Historic Places and currently operates as the Fort Ross State Historic Park.

The visitors remained for the better part of a month, obtaining much-needed supplies and enjoying lavish entertainment. Adelbert von Chamisso, a botanist with the expedition, noted that California seemed neglected: no imports had arrived from Mexico in the preceding six or seven years, while trade restrictions prevented the region from becoming a true agricultural and commercial site. "The misery in which they had been wallowing for six to seven years, forgotten by Mexico, the motherland, did not allow them to be good hosts." This was alluded to by other visitors: since the Spanish neglected to send regular supply ships to the colonists, the Californios seldom turned away foreign skippers when they arrived with shiploads of essential goods. Independence did not greatly change this scene. When Kotzebue returned in 1824 aboard the Russian frigate *Predpriste*, conditions had hardly improved: he had to send gunpowder ashore so the Mexican sentinels could adequately return his salute. The navigator noted:

It has hitherto been the fate of this region, like that of modest merit or humble virtue to remain unnoticed, but posterity will do it justice. Towns and cities will hereafter flourish where all is now a desert . . . the water over which scarcely a solitary boat is seen to glide, will reflect the flags of all nations and a happy, prosperous people, receiving with thankfulness what prodigal nature bestows for their use, will disperse its treasures over every part of the world.²⁸

Echoing Vancouver's assessment, Chamisso observed that the presidio was undermanned and lacked boats; only the mission had a few "bad barks, built by foreign captives."²⁹

28 Like others before him, Chamisso was dismayed that "Spain did not have a single boat on the bay." See Edward Mornin, "Adelbert von Chamisso: A German Poet-Naturalist and His Visit to California," *California History* 78, no. 1 (Spring 1999): 2-13.

29 Mornin, "Adelbert von Chamisso," 6.

(Interestingly, the missions at San Jose and Santa Clara along the southern arms of the bay had their own launches and a “strong, light and slender boat” used to conduct trade with Russian settlers at Fort Ross.³⁰) Despite Rezanov’s views, the Russians were more content with peaceful commercial relations than with military conquest, as evidenced by the recurring visits of Russian merchantmen. By 1841, however, with fur stocks in decline, the Russians abandoned their holdings at Fort Ross and retreated to Alaska.

While the British and Russians were the most frequent visitors to Spanish-Mexican California, they were by no means alone. The appearance of the French merchantman *Bordelais* in August 1817 spoke to the growing international interest in San Francisco, but it was, like the Russian visit, purely a commercial venture. (This was not the first time the French flag appeared in California waters: in 1786, two frigates of the Royal French Navy under the command of Captain Jean Francois Galaup, Comte de La Perouse, spent ten days in Monterey, taking on water and supplies for a trip to the Philippines. *Boussole* and *Astrolabe* were among the first non-Spanish ships to anchor in California waters since *Golden Hinde* nearly two hundred years earlier.) Subsequent events proved that it was not the Russians, the French, or the English, but the Americans who posed the most serious threat to Spanish control of California.

In the days following independence, American merchants—now divorced from the mercantilist protections that granted them unfettered access to the guaranteed markets of Great Britain—were hard-pressed to find new outlets for their agricultural exports. Intrepid American entrepreneurs sought consumers in the Levant (where they encountered North African pirates—the Barbary corsairs—in their pursuit of opium), the Orient (where the “flowery-flag devils” were met with indifference by court officials) and in similar scattered parts of the globe. During these far-flung voyages taking up to three years, American merchant sailors heard of commodities, native to the Pacific coast of North America, that could bring tremendous profits if delivered to Asia. Sea otter pelts, which one tradesmen described as “the most beautiful object, other than a woman, that can be placed before a man,” were known to command upward of \$200 each in Canton. Gathered for as little as \$2 in the waters of the eastern Pacific, this was naturally alluring.³¹

With 100,000 follicles per square inch, the luxuriant furs were used by fashionable ladies, court officials, and image-conscious consumers throughout Asia. Shrewd merchants exchanged this cargo for tea and silks that fetched a handsome profit in London or other western markets (for, as one observant merchant stated, “tea must be drunk, and silk must be worn, as long as there is a female influence in society, a time that will last until happy eternity”³²). The pursuit of sea otter pelts and other commodities for exchange in the bustling markets of China ushered in a period of sustained contact between Spanish colonial California and the infant United States. It was a fateful relationship: although most American merchantmen made for the ports of the Pacific Northwest, it was inevitable that citizens of the new republic would soon be encountered in California. As early as 1789, Governor Pedro Fages alerted San Francisco comandante José Darío Argüello to seize any foreign vessel that might stop there, and decreed that no foreigners were to land

30 Mornin, “Adelbert von Chamisso,” 7.

31 Adele Ogden, *The California Sea Otter Trade, 1784–1848* (Berkeley: University of California Press, 1941).

32 On Ledyard, see Edward G. Gray, *The Making of John Ledyard: Empire and Ambition in the Life of an Early American Traveler* (New Haven, CT: Yale University Press, 2007), 60.

at California ports or cross its borders.³³ (The first American to set foot in California was John Green, a sailor who had been part of a scientific expedition led by the Italian mariner Alejandro Malaspina, who, sailing for Spain, surveyed Monterey in 1791. Green died during the expedition and was interred at that town's presidio.) Perhaps this was a necessary step. In November 1818, United States Special Commissioner J. B. Prevost proposed seizing San Francisco, lest it fall into Russian hands: "The port . . . is one of the most convenient, extensive, and safe in the world, wholly without defense, and in the neighborhood of a feeble, diffused, and disaffected population. Under all these circumstances, may we not infer views as to the early possession of this harbor, and ultimately to the sovereignty of all California?"³⁴

On November 20 of that same year, French-born privateer Hipolito de Bouchard, flying the flag of the revolutionary Republic of Buenos Aires, sailed two black-hulled vessels into Monterey Bay, sacking the town before heading south to raid other coastal settlements.³⁵ At least three members of the crew were American: Joseph Chapman was captured at Monterey but paroled, going on to lead a respectable life in that community. Thomas Doak of Boston and an African-American known simply as Bob had previously jumped ship; in due time they were baptized ("Felipe Santiago" and "Juan Cristobal"), married into leading Monterey families, and became well-established members of that society.³⁶

Despite imperial proscriptions against trade with foreigners (including a 100 percent duty levied against goods carried in non-Spanish ships), Californians were accustomed to foreign-flagged vessels entering their ports. Distressed whalers and other vessels in need of assistance were granted access on humanitarian grounds, allowed to stay long enough to secure repairs and provisions. So long as the vessel departed within a limited amount of time (usually within 24 to 48 hours) there was no need for concern; items acquired and services rendered were paid for with household goods brought from New England or other regions. It was not long, of course, before many whalers used this ruse to develop a full-fledged trading network: claiming need of assistance, merchantmen pulled into port and off-loaded their cargo (in one extreme case, a baby grand piano shipped around Cape Horn to Monterey) for California clients ordering from East Coast manufacturers.³⁷ Gradually, then, a surreptitious trade between Spanish California and the infant United States began, with manufactured items making their way from the East Coast in

33 The maritime border was by far more porous. The first overland party to reach California arrived in 1836 under the command of American fur trapper Jedediah Strong Smith. He and his followers were promptly ejected. Jon Carlson, "The 'Otter-Man' Empire: The Pacific Fur Trade, Incorporation, and the Zone of Ignorance," *Journal of World Systems Research* 8, no. 3 (2002): 390–442.

34 James R. Gibson, *Otter Skins, Boston Ships, and China Goods: The Maritime Fur Trade of the Northwest Coast, 1785–1841* (Montreal: McGill-Queens University Press, 1992).

35 Carlos Lopez, "Hipolito Bouchard: Pirate or Patriot?" *Mains'l Haul: A Journal of Pacific Maritime History* 36, no. 4 (2000): 22–33. See also Craig Arnold, "Pirates on the Pacific Coast of New Spain," *Mains'l Haul: A Journal of Pacific Maritime History* 32, nos. 2–3 (1996): 24–34, 26–36; and Peter Gerhard, *Pirates on the West Coast of New Spain* (Glendale, CA: Arthur H. Clark Company, 1960).

36 Allen Light, a shipmate of Richard Henry Dana on *Pilgrim*, had a similar experience. Jumping ship in San Diego in 1835, he became a successful otter hunter, earning the sobriquet "Black Steward" and becoming a Mexican citizen three years later. By 1843, Light had settled comfortably in Mexican California, having been appointed a special commissioner responsible for stopping illegal poaching activities.

37 For further details on the role of whalers in undermining Spanish and Mexican authority, thereby creating the grounds of a bloodless American takeover, see Boyd Huff, *El Puerto de Los Balleneros: Annals of the Sausalito Whaling Anchorage* (Los Angeles: Glen Dawson, 1957).

return for sea otter pelts destined for Chinese markets or, in later years, mission-produced hides and tallow.

The first American ship to call at a California port was the appropriately named *Otter*, a Boston-based vessel under the command of Ebenezer Dorr, which docked at Santa Cruz (near Monterey) in 1796. Engaged in the pelt trade with northwest natives, the eponymous vessel made trans-Pacific runs to the Sandwich Islands (present-day Hawaii) then to the markets of mainland China. When she called at Monterey for fresh water, few realized or expected that this would usher in a period of sustained contact between California and the East Coast, or that this visit would set in motion a series of events that would lead to the eventual acquisition of that territory by the United States.

Three years after this inaugural contact, on May 24, 1799, another Boston-based ship, the twelve-gun, 159-ton *Eliza*, called at San Francisco. Becoming the first American-flagged vessel to visit the port, the ship, captained by James Rowan, acquired provisions and hastily departed, in full compliance with Spanish law. Before departing, however, Rowan hinted broadly that good money would be paid for sea otter pelts by the next American ship allowed to berth in the port. The second American vessel to call at Yerba Buena, *Alexander*, arrived four years later, in May 1803. Captain John Brown remained there for a week and sailed for Bodega Bay, a few miles north, to trade sea otter pelts with local tribes. Returning in August with another vessel (*Hazard*) in tow, Brown sought relief, claiming that he had been attacked by hostile natives along the coast. The commandant refused to allow *Alexander* to stay, but permitted *Hazard*, ironically captained by the same James Rowan who had first visited the port in 1799, to stay for a few days. Owing to bad weather, that ship remained in port for more than a week before departing for Asia with its cargo of pelts and Hawaiian sandalwood. It would not be the last time *Hazard* visited Yerba Buena: on January 30, 1804, the vessel returned. On a voyage from the Sandwich Islands she suffered the loss of five men, her boats, and a mast during a severe storm: allowed to refit at Yerba Buena, she continued on to the Pacific Northwest.

Far to the south, the relationship between Californios and Americans developed along a somewhat different line. In 1800, *Betsy*, also out of Boston, was the first US ship to call at San Diego; like her predecessors in San Francisco, she tarried just long enough to raise the suspicion of Spanish officials before hastily departing. The same could not be said of William Shaler of *Leila Byrd* who fought a cannon duel with Spanish shore batteries at Ballast Point when they tried to halt his illegal trade in otter pelts in 1803.³⁸ This close encounter did not deter Shaler: where earlier captains, fully aware of Spain's embargo, were wary to overstep their bounds, Shaler saw opportunity. Through his ambitious activities, the United States became acutely aware of the economic importance of California and of how woefully defended its ports and poorly enforced its laws really were. Gradually, and in spite of Spain's embargo, California products began to find their way to Atlantic coast markets. So, too, did Spanish authorities become aware of American intentions. By 1803, the reputation of US whalers for smuggling was so marked that the commandant of the

38 Shaler was part owner of the 175-ton brigantine, which he shared with his partner Richard Jeffry Cleveland. *Leila Byrd* featured a crew of two dozen, in addition to a Tahitian woman who had joined the expedition in the South Pacific, and featured a slight armamentarium of six small cannon. For a good treatment of this trade, consult Mary Malloy, *Boston Men on the Northwest Coast: The American Maritime Fur Trade, 1788–1844* (Fairbanks: University of Alaska Press, 1998).

San Francisco Presidio was cautioned about the “foreign ships which, under the pretext of whaling, have touched our shores and dealt in contraband.”³⁹

Returning from the Orient and the Sandwich Islands in 1805, Shaler dropped anchor off San Pedro, and spent the following months sailing up and down the California coast, trading with Indians and whites in defiance of Spanish law. In a precursor to global commodity exchange that would define California for centuries to come, this early nineteenth-century sea captain traded Hawaiian sugar, Chinese silks, and New England-produced household goods for local California commodities. While earlier sea captains targeted sea otter pelts, the diminishing population of fur-bearing animals caused others new to the game to seek out other commodities to be collected at California. Shaler noted the huge vats of tallow—a rendering of bone marrow and animal fats used as a lubricant and illuminant—and untold thousands of hides, obtainable for next to nothing, for which he knew New England shoe and harness makers would pay well. Of even more importance, Shaler observed that the laws of Spain carried little weight when paper decrees remained unenforced. Moreover, since the Americans were providing much-needed services in the absence of Spanish support, there was little incentive for those who might ordinarily be inclined to enforce imperial trade restrictions and regulations. Even if they were to oppose the American presence, California could do little to withstand an American commercial (or military) onslaught. Commenting on the long stretches of coastline and insufficient harbor defenses, Shaler, returning to Boston in 1808, boldly noted in that city’s press: “The conquest of this country would be absolutely nothing. . . . It would fall without effort to the most inconsiderable force. . . . The Spaniards have a few ships or seamen in this part of the world. . . . It would be easy to keep California in spite of the Spaniards as it would be to wrest it from them in the first instance.”⁴⁰

Inspired by Shaler’s report, increasing numbers of New England sea captains put in at California ports, commencing an American economic penetration at which mission fathers and hidalgos looked askance, though some welcomed and abetted it. In the first two decades, sea otter remained the most valuable California export, and Yankee captains profited handsomely from this trade. One merchant obtained 300 sea otter skins for two yards of cotton cloth apiece; another allegedly obtained \$8,000 worth of furs for a rusty iron chisel. Captain William Sturgis—who once cleared over \$100,000 during the height of the Jeffersonian embargo—purchased 560 skins, worth \$40 apiece, with goods that cost \$1.50 in Boston. Between 1800 and 1820, 90 percent of American and British ships leaving California harbors contained sea otter pelts as part of their cargo, unleashing an ecological calamity as the otter population declined precipitously.⁴¹ By that time, it was not unusual for Boston fur ships to carry \$100,000 cargoes from the American West Coast to China, exchanging their commodities for spices, silks, gold, and silver, in a veritable recreation of the Spanish galleon trade.⁴² Such profit came at a price: by 1820, the sea otters were almost exterminated and

39 José Joaquín Arrillaga to the Commandants of the Presidios from San Diego to San Francisco Loreto, June 13, 1830, *State Papers Sacramento*, II, 58–59.

40 See Richard F. Pourade, *History of San Diego* (San Diego: Copley Press, 1977).

41 Derek Pethick, *The Nootka Connection: Europe and the Northwest Coast, 1790–1795* (Vancouver: Douglas and McIntyre, 1980).

42 Frederic William Howay ed., *Voyages of the Columbia to the Northwest Coast, 1787–1790 and 1790–1793* (Portland: Oregon Historical Society, 2000).

their trade was replaced by commerce in hides and tallow, also valuable to Yankee traders.

The virtual extinction of fur-bearing marine mammals from California waters forced American entrepreneurs to locate other products that could turn a profit. Between 1822 and 1848, California exported more than one million hides and over 7,000 pounds of tallow. Richard Henry Dana wrote of “large, schooner-rigged open launches,” maintained by the various missions and built and crewed by native neophytes that carried upward of six hundred hides apiece, ferrying commodities from ship to shore all along the California coast.⁴³ Most of this trade was conducted by New England merchants who sold the hides to Boston tanners and leather-goods factories, and the tallow to South American candle and soap factories. Yankee ships returned from New England filled with manufactured items to sell in California, turning into “floating department stores” hawking everything from shoes, furniture, liquor, and jewelry to fireworks, musical instruments, and fine silk handkerchiefs. As one American captain explained, “We served to clothe the naked soldiers of the king, when for lack of raiment they could not attend mass, and when the most reverend fathers had neither vestments nor vessels fit for the church, nor implements wherewith to till the soil.”⁴⁴

From Shaler’s early actions sprang such a lucrative market that East Coast skippers flocked to the port despite attempts to enforce a foreign-trade ban imposed by the king of Spain. These attempts, in part, led to the South American Wars of Independence, and the eventual transfer of Alta California from Spanish to Mexican control.⁴⁵ With Mexican independence came an easing of trade restrictions: prohibitions against foreign vessels calling at California were abolished, and legitimate commercial intercourse increased dramatically, but prohibitively high customs duties ensured that smuggling would continue. What had once been shadowy commerce between Californians and outsiders became a permanent institution. In 1821, the last year of Spanish control, nine ships visited California; the following year, the number rose to twenty, and to twenty-four in 1826. Mexican independence ended many restrictions on foreign trade, and the new government’s lack of authority and scattered coastal patrols made collecting import and export tariffs difficult. It was not an auspicious start for Mexican California.⁴⁶

California hides helped give New England a monopoly on the shoe industry, while East Coast merchants found a virgin market for their manufactured products. The canonical and iconic work on this subject, the first-person account *Two Years before the Mast*, recounts the experiences of a young Richard Henry Dana, aboard the Boston vessel *Pilgrim*. The brig was typical of its day: bluff-bowed, with nearly parallel sides and a short run aft, and intolerably slow. Long periods of monotony were broken by frenetic paces of activity as sea captains, wary of meddling Spanish officials, sought to minimize their time

43 FoundSF, “Angel Island (Wood Island”), [http://www.foundsf.org/index.php?title=Angel_Island_\(%22Wood_Island%22\)](http://www.foundsf.org/index.php?title=Angel_Island_(%22Wood_Island%22)).

44 Robinson, *Life in California during a Residence of Several Years in that Territory* (New York: Wiley and Putnam, 1846). On Robinson, see Adele Ogden, “Alfred Robinson: New England Merchant in Mexican California,” *California Historical Society* 23 (1944): 193–218.

45 Of course, this was but one of the contributing factors to the South American wars of liberation.

46 Sometimes, the needs of the remote outpost were poorly understood: in 1841, the brig *Joven Carolina* arrived with a cargo of cocoa, while another South American visitor brought only sugar cakes and coffee beans. An excellent treatment of this period can be found in Jessie Davies Francis, *An Economic and Social History of Mexican California, 1822–1846* (New York: Arno Press, 1976).

in port. Cargoes were lightered from ship to shore in San Diego (which would become the center of the hides-and-tallow trade) or decrepit ports like San Pedro (which Dana described as “a desolate place . . . the worst we had seen yet”⁴⁷). During these years, and through these activities, Americans developed an interest in Southern California and by 1820, a fleet of Yankee ships was sailing around Cape Horn to load California hides and tallow at San Pedro or San Diego. Generally not more than a dozen vessels arrived in any one year, though they can be credited with inaugurating a commercial connection far out of proportion to their number. As late as 1847, hides were reputed to fetch between \$1.50 and \$2.00 per piece, and more than 100,000 were said to be shipped yearly from various California ports. Ships in the employ of Boston merchants William Appleton and Company, Bryant, Sturgis and Company, or Joseph B. Eaton and Company moved from port to port, trading with local ranchos at Santa Barbara, Santa Cruz, or any other place where there was an accumulation of hides.

Although the sea otter trade continued into the 1840s, by the time of Mexican independence, cattle hides and tallow had gradually surpassed the former commodity. The voyage of the Boston-based *Sachem* was particularly telling. Departing from Massachusetts in January 1822, she returned there two years later loaded with hides that she discharged at considerable profit to the shoe manufacturers at Brockton.⁴⁸ More important, it was the first time a Boston vessel had sailed for the Pacific and returned directly home without stopping first at Hawaii or China—a harbinger of things to come. The overall result of these activities, both legitimate and illicit, was even deeper penetration of California markets by American merchants and sea captains. With the coming of Mexican independence in 1822, trade restrictions between California and the rest of the world relaxed with dire consequences for the new republic. In the quarter century from 1821 until American annexation in 1846, the Mexicans endured what Spain long feared: the gradual erosion of their power and influence in California to a steady stream of outsiders.

The reasons for this decline are easily understandable. The non-Indian population of Mexican California never exceeded seven thousand, of which less than one thousand were adult males. The leading families of Mexican California, moreover, led lives of comfort and civility, especially after developing trade with New England or other locales. Increasing contact with the outside world transformed the region dramatically, destabilizing internal politics while nudging it ever closer to the American orbit. Early American merchants wrote glowing and covetously of California. While financial concerns were centered on sea otters to the north or hides to the south, few doubted that the true wealth of California centered on the San Francisco harbor. The first book by an American writer describing the region was penned by Benjamin Morrell, who, in command of the schooner *Tartar*, visited San Francisco in 1825 and seven years later published a book in which he wrote:

The bay of San Francisco, connected with the surrounding scenery, is the most delightful I have ever seen on the western coast of America . . . it presents a broad sheet of water, of sufficient extent to float all the British navy without

47 Cited in Guinn, *A History of California*, 450.

48 *Sachem* was commanded by William Alden Gale, who had first learned of the trade in hides from a Mexican official sent to California to guard against American fur smugglers. Envisioning a lucrative Cape Horn trade, Gale outbid rival English claimants for a large shipment of hides, thereby ushering in a long-standing period of trade.

crowding; the circling grassy shore, indented with convenient coves and the whole surrounded with a verdant, blooming country, pleasingly diversified with cultured fields and waving forests, meadows clothed with the richest verdure in the gift of bounteous May; pastures covered with grazing herds; hill and dale, mountain and valley, noble rivers and gurgling brooks. Man, enlightened, civilized man, alone is wanting to complete the picture, and give a soul, a divinity to the whole. Were these beautiful regions, which have been so libeled, and are so little known, the property of the United States, our government would never permit them to remain thus neglected. The eastern and middle states would pour out thousands of emigrants, until magnificent cities would rise on the shores of every inlet along the coast of New California, while the wilderness of the interior would be made to blossom like the rose.⁴⁹

In 1835, Alexander Forbes, an author who spent significant time in California, wrote glowingly of the region, noting, “the port of San Francisco is hardly surpassed by any in the world. . . . Perhaps no country whatever can excel or hardly vie with California in natural advantages.”⁵⁰ That same year, Daniel Webster opined on the floors of Congress that San Francisco Bay was worth twenty times the value of Texas, but when President Andrew Jackson offered the Mexican government the sum of \$3.5 million for the region, he was rebuffed.

Dana, who visited in 1835 and whose book appeared a half decade later, concurred. Though he was distressed by the lack of “civilization,” noting but one building, “a shanty of rough boards put up by a man named Richardson, who was doing a little trading between the vessels and the Indians,” he did add, prophetically: “If California ever becomes a prosperous country, this bay will be the center of its prosperity. The abundance of wood and water; the extreme fertility of its shores; the excellence of its climate, which is as near to being perfect as any in the world; and its facilities for navigation, affording the best anchoring-grounds in the whole western coast of America: all fit for a place of great importance.”⁵¹ Like others before him, the young New Englander commented on the rustic nature of a region that would soon become one of America’s most urban locales: he reported how gunshots aboard his vessel had disturbed herds of deer on the hillsides of what is today San Francisco; of elk swimming the Carquinez Straits; of coyotes and puma howling in the hills behind Mission Bay; of bear attacks in San Leandro; of pelicans attacking hapless missionaries throughout the bay.

The hide and tallow merchants tended to come from the best families of New England and represented the rise of the Boston Brahmin in the later nineteenth century. In addition to John Marsh, a graduate of Phillips Andover Academy and Harvard College, they included Thomas O. Larkin, Faxon Dean Atherton, and others who left their names on the California landscape as testament to the pivotal role they played in developing an international economy in Mexican California. Shortly after Mexican independence, American merchants supplanted their English competitors and came to dominate the trade. William

49 Benjamin Morrell. *A Narrative of Four Voyages* (New York: J & J Harper, 1832).

50 Alexander Forbes was a partner in the Mexican firm of Barron & Forbes, who invested in California trade and ultimately were the initial developers of the New Almaden mercury mines south of San Jose.

51 Richard Henry Dana, *Two Years before the Mast* (1841; reprint, New York: Collier, 1961), 46.

Alden Gale, a Massachusetts man in command of a general cargo trader (that carried, among other things, tombstones, drugs, and iron safes), abandoned this varied cargo in favor of hides and finished leather goods.⁵² In command of the aforementioned Sachem, he outbid the English, cornered the market, and carried the first shipment of hides out of Mexican California. Paying a lump sum to local officials, merchants such as John Bryant and William Sturgis of Boston controlled two-thirds of the trade by the 1830s, and their ship Brookline carried the most valuable cargo ever sent to the Pacific. Furious customs agents refused to let the cargo ashore, but this did not end the nascent trade. Manufactured goods made their way around Cape Horn to California, where they were exchanged for sea otter pelts that were transshipped to China; exchanged there for tea, silks, and other luxury items, these goods eventually made their way to the ranchos of California where they were traded for hides and tallow. All told, the complicated network linked markets separated by thousands of miles and two oceans, while seeding an American presence throughout the Pacific Rim, and linking California to the outside world. Many of the commercial agents married into leading families in the areas they visited, or otherwise ingratiated themselves with local elites, all the time drawing closer financial and political links between the United States and Mexico's northernmost territories. In the words of one historian, "long before the first shots were fired in the Mexican War, California had already fallen to Boston trade ships."⁵³ William Garner summed up the relationship between California and the United States as evidenced by the hide and tallow trade in the year that conflict began:

Notwithstanding that oxhides are sold here for a dollar and fifty cents each for cash, you cannot buy one half the time, a pair of shoes. . . . Still, ox-hides can be taken from California to America . . . tanned and dressed, and made into shoes and then brought around Cape Horn, and an importation duty paid, and after all this trouble and expense, they are sold here at the same price as those manufactured in the country [CA] and very frequently from twenty to fifty per cent less.⁵⁴

Clearly, despite achieving independence a quarter century earlier, Mexico maintained California in a colonial dependency whereby that region was export-oriented and dependent upon outside manufacturers for finished goods.

The growing American presence—between 1800 and 1847 an estimated 200 US vessels carried some five million hides from California—and interest was aided and abetted by a continuing reluctance on the part of Mexican officials to agree with the increasingly

52 Hubert Howe Bancroft, *Albatross: Log-book of a Voyage to the Northwest Coast in the Years 1809–1812, Kept by Wm. Gale, MS in History of California: 1801–1824* (Berkeley: University of California Press, 1886).

53 Karen Clay, "Trade, Institutions, and Credit: Contract Enforcement on the California Coast, 1830–1846," *Explorations in Economic History* 34, no. 4 (1997): 495–521.

54 W. R. Garner, *Letters from California, 1846–1847* (Berkeley: University of California Press, 1970).

liberal demands of Alta California.⁵⁵ Settlers there, who now included a sizable number of non-Mexican immigrants, called for greater representation in the Mexican government, for a loosening of restrictions on trade and commercial activities, and for an end to the stipulation that all Mexican nationals be members of the Roman Catholic faith. Furtive independence movements had been squelched—either by force (1831) or capitulation to Californio demands (1836)—but there was seething discontent, discontent that Larkin, in his role as American consul and confidential agent, was ordered to monitor. Larkin was further instructed to offer assistance to any such movement that had a chance of success, and to position the Americans in such a way so that Russian interests in acquiring the territory would be thwarted.⁵⁶ He would get his chance to involve the United States in California, but in a way that few would predict.

In 1841, the port hosted Commodore John Wilkes and the United States Exploring Expedition; while he had been directed to make extensive explorations in the Pacific, his instructions directed him to visit California, with “special reference to the bay of San Francisco,” and the surveys ordered in other parts of the Pacific were presumably regarded as of secondary and incidental value.⁵⁷ In the midst of a four-year scientific and military venture, the crew was happy to have returned to North America, but anxious to return to the East Coast. When Wilkes finally brought his weary crew to New York in 1842, his official report (not published until three years later) suggested that San Francisco was “one of the finest, if not the very best harbor in the world,” adding, prophetically, “the situation

55 David Igler compiled a database for every known vessel entering California waters between 1786 and 1848, with information on nationality, ship type, voyage route, personnel, and cargo. In all, at least 953 vessels either stopped in Alta California or approached its coast prior to the Gold Rush, making it one of the most visited parts of the Eastern Pacific. The vast majority of these vessels continued on to the North West Coast, Alaska, and/or Hawaii, illustrating the network of commercial ports that linked the future American Far West long before the United States annexed its Pacific territories. International voyages from ports in the Atlantic Ocean comprise the largest share of traffic in this regional network. Based on the 953 ships entering California waters, 6.8 percent arrived between 1786 and 1799, 5.7 percent in the decade after 1800, 7.6 percent in the 1810s, 24 percent in the 1820s, 22 percent in the 1830s, and 34 percent in the first eight years of the 1840s. In short, trade gradually increased until the 1820s, when it swelled due to developments in California and throughout the Pacific, including Mexican independence, the termination of trade restrictions in many ports (especially Canton and previously Spanish-controlled ports), and the global dissemination of the news about Pacific trading opportunities. The largest share of ships entering California were American (44%), British (13%), Spanish (12%), Mexican (12%), Russian (7%), but trading vessels from at least 17 other Pacific and European nations also visited California in the first half of the nineteenth century. While Spanish supply ships from Mexico made up the larger share of California traffic before 1800, American vessels soon surpassed all other trading nations by a large margin. United States' commercial interests in the Pacific long predated and ultimately influenced its geopolitical and military interests of the mid-nineteenth century. Despite the strong position attained by US trading vessels in California and the Eastern Pacific, at least 527 ships sailing under more than 20 different flags also entered California waters. The point here deserves emphasis: California's commercial activity was international prior to the worldwide convergence of gold seekers, and, perhaps more important, this internationalization of commerce mirrored developments throughout the Pacific Basin. See David Igler, “Diseased Goods: Global Exchanges in the Eastern Pacific Basin, 1770–1850,” *American Historical Review* 109, no. 3 (June 2004): 693–719.

56 That same year saw the first American naval presence in the region, when the USS *Peacock* was dispatched to Monterey following the seizure of the sugar trading ship *Loriot* and the arrest of its supercargo, A. B. Thompson, in 1833. Following the arrest and deportation of many foreigners in 1840, the Navy sent *St. Louis* and *Yorktown* to that same port.

57 John S. Hittell, *A History of the City of San Francisco* (San Francisco: A. Bancroft Company, 1878), 94.

in California will cause its separation from Mexico before many years.”⁵⁸ His sentiments were echoed by many of the other Americans who were moving into the trans-Sierra West:

58 Hittell, *History of the City of San Francisco*, 95. Wilkes was not alone. Another author lauded San Francisco as “one of the finest harbors in the world, possessing every requisite for a great naval establishment” (95). American aims might have been speeded by British intentions. In 1842, Sir George Simpson, head of the Hudson’s Bay Company, visited Yerba Buena. He saw the bay as “one of the finest harbors in the world . . . a miniature Mediterranean . . . an inland sea.” Robert Greenhow, *History of Oregon and California* (New York: Freeman and Bowles, 1847), 96.

whether part of a military reconnoiter or overland fur-trapping ventures, or as agricultural migrants heading along the California and Oregon trails, many Americans noted the desirability of adding California to the Union and of making “manifest destiny” a reality.⁵⁹

Increasing hostility between the United States and the Republic of Mexico, largely over the rumored acquisition of the independent breakaway Republic of Texas by the former, further fueled the fire initially set by expansionist (and sometimes overtly racist) jingoists who feared the “loss of California” to other nations. There was some truth to these concerns: in addition to the Russians, both the French and English sent scientific, commercial, and military expeditions to the region in hopes that they might acquire the territory. Smoldering sentiments of manifest destiny, whereby the United States was fated by divine providence to extend from Atlantic to Pacific, added to the already tense political situation. The fire grew steadily until it reached the point of conflagration. Acting on a rumor of war between the United States and Mexico, and fearful that Britain would then seize California, American commodore Thomas ap Catesby Jones sped north from his post in Callao, Peru, entered the harbor at Monterey with the frigate *United States* and the corvette *Cyane*, seized the town, and on October 19, 1842, replaced the Mexican standard with the American. Informed of his precipitous and erroneous action, Jones sailed the next day for Los Angeles, where he proffered his personal apology to Governor Manuel Micheltorena. Despite this gaffe, the United States maintained an active naval presence in the region: a large naval force remained in Mexican waters until 1843, and five American warships visited California ports between 1844 and 1845. It remained official policy that should war ever result between the United States and Mexico that the first priority was to seize California. In a missive dated June 24, 1845, Secretary of the Navy George Bancroft directed Commodore John Drake Sloat: “If you should ascertain, with certainty, that Mexico has declared war against the United States, you will at once possess yourself of the port of San Francisco, and blockade or occupy such other ports as your force may permit.”⁶⁰

Rumors of war were soon replaced by actuality of conflict. In 1846, claiming that “American blood had been shed on American soil” by Mexican soldiers engaged in a reconnaissance mission in south Texas, President James K. Polk asked Congress for a declaration of war. In what is widely seen as a red herring, the war was not about Texas at all: it was, first and foremost, an excuse and an opportunity to add California and her deepwater ports to the United States. Hotly contested by American antiwar forces (“Why”, they asked, “had equally strong claims to British Columbia been abandoned and these claims pursued? Was it really a war to add more slave territories to the United States?”) and by the Mexican military, the war resulted in the loss of over one-third of that country’s territory. The results were hardly surprising. At the outset of the war, the American Pacific squadron was a stout eight vessels strong and ready for action: led by the flagship 54-gun frigate *Savannah*, it also included the frigate *Congress* (54 guns), sloops of war *Warren* (24 guns), *Plymouth* (22 guns), *Levant* (22 guns), *Cyane* (20 guns), the schooner *Shark* (12 guns), and the store-ship *Erie* (4 guns). The war is often depicted as an easy military victory for the Americans,

59 John Scaglione and Peter Skene Ogden, “Ogden’s Report of His 1829–1830 Expedition,” *California Historical Society Quarterly* 28, no. 2 (June 1949): 117–24.

60 Herbert M. Hart, “The American Capture of Monterey, 1846,” *California State Military Museum*. <http://www.militarymuseum.org/Monterey.html>.

and while the struggles in California tend to support that interpretation, brave Californios fought desperately and valiantly to stem the tide against a superior military opponent. Still, the naval might of the United States could not be denied: during the conflict, warships cruising off the coast of California captured twenty-nine vessels and virtually isolated the region from support and resupply. Aside from American whaleships and government vessels calling for repairs or with supplies, the California coast was essentially blockaded and the region cut off from the outside world.

The “Conquest of California” began in June 1846, when a ragtag group of American fur trappers and mountain men, led by “the pathfinder” John C. Fremont (son-in-law of Missouri senator Thomas Hart Benton, leading acolyte of manifest destiny) and the infamous Kit Carson, declared the establishment of the Republic of California, hoisting the Bear Flag above the Sonoma estate of General Mariano Guadalupe Vallejo. Fremont, a captain in the US Army Topographic survey and member of an engineering party on his third survey of the region, subsequently made his way to the presidio at San Francisco (ferried from the North Bay to that encampment by Captain William Phelps of the hide-and-tallow trader Moscow) where he spiked the guns defending that enclave and made way for the eventual acquisition of the port. During his journey, Fremont gave the name “Golden Gate” to the narrow harbor entrance: “I gave it the name Chrysopylae, or Golden Gate, for the same reason the harbor of Byzantium was called Chrysoceras, or Golden Horn.”⁶¹ Never was a name bestowed more prophetically: not even Fremont could know that within a few years hundreds of ships would pour through this portal in history’s greatest gold rush.⁶²

Hearing of hostilities with Mexico (particularly of battles on the Rio Grande), and cognizant of Fremont’s actions, American naval leaders decided to strike while the iron was hot. On July 7, Commodore Sloat sailed into Monterey, sending ashore a contingent of marines from Savannah, Cyane, and Levant. Raising the American flag over the custom-house, Sloat proclaimed all of California “henceforth a part of the United States.” He predicted a “great increase in the value of real estate . . . the country cannot but improve more rapidly than any other on the continent of America” under the permanent domination of the United States.⁶³ Two days later, the US Navy occupied Yerba Buena, seizing the harbor at San Francisco Bay, in an engagement that took just three days. Captain John B. Montgomery, leading a contingent of marines ashore from the sloop of war USS Portsmouth (dispatched from Monterey on April 25 to claim the city), was astounded by the diversity seen among the few hundred residents, among whom he claimed to hear twenty different languages spoken.⁶⁴ The diversity was soon to increase: shortly after the

61 Along with the role played by Drake’s *Golden Hinde* and Ayala’s *Golden Fleece*, the term *Golden Gate* would symbolize the future role that mineral wealth would play in the region’s history. John C. Fremont, *Geographical Memoir upon Upper California* (Washington: Wendell and Van Benthuysen, 1849).

62 By September 1846, there were a reported “thirty large vessels consisting of whalers, merchantmen and the USS sloop of war *Portsmouth* at anchor on the placid and glassy surface of the magnificent bay and harbor” (Edwin Bryant, *What I Saw in California: Being a Journal of a Tour, by the Emigrant Route and South Pass of the Rocky Mountains, across the Continent of North America, the Great Desert Basin, and through California, in the Years 1846–1847* [New York: Appleton and Company, 1849], 298).

63 Edwin A. Sherman, *The Life of Rear-Admiral John Drake Sloat* (Oakland: Carruth and Carruth, 1902), 76.

64 Among the officers on *Portsmouth* was Joseph Warren Revere, grandson of Paul Revere, and future Brigadier General in the United States Army during the Civil War.

Americans claimed the city, a group of 238 persecuted Mormons, led by Sam Brannan, disembarked from Brooklyn. Brooklyn was a typical pre-gold rush trader: 450 tons, she carried a diverse cargo of immigrants, a trio of flour mills, a printing press, and a library of 179 volumes. Setting out in January, she proceeded via Honolulu to San Francisco, arriving just days after the American conquest. These Mormon pioneers, representing the largest shipload of people ever seen up to then in San Francisco, brought social solidarity and much-needed manual skills as carpenters, millwrights, and as general community builders. Arriving on July 31 after a nine-month trip around Cape Horn, Brannan—who would establish the first English-language periodical in the city, the *California Star*—had hoped to induce other members of the Church of Jesus Christ of Latter Day Saints to abandon Utah for California. (This contingent had originally been destined for Oregon.) Amid a high-profile debate with Brigham Young and battles against personal demons, the entrepreneurial Brannan—who would go on to found the first flourmill and the first group of vigilantes in San Francisco—was unsuccessful in his plans, though he remains an important figure in early American California.⁶⁵

After securing northern California, Robert Field Stockton, who had arrived in Monterey on July 15 to relieve the aged and ailing Sloat, then turned his attention to the south. On August 4, naval forces landed at and claimed Santa Barbara; two days later, the same fate befell San Pedro. Stockton ordered Fremont to load his battalion on the USS *Cyane*, under command of Samuel F. DuPont, and sail for San Diego, where the American standard was raised. Fremont then marched north and met Stockton's force of sailors and marines (an 800-man contingent from the USS *Congress*) where they entered the pueblo (civil settlement) of Los Angeles, the largest settlement in Alta California, on August 13. Aided by 350 sailors led by Captain William Mervine of the USS *Savannah*, who was sent south from Sausalito the month before, the pueblo fell without a shot. One American, commenting on the apparent ease with which this early phase of the conquest had been completed, observed, "we simply marched all over California from Sonoma to San Diego, and raised the American flag without opposition or protest. We tried to find an enemy but could not."⁶⁶ The naval and maritime component of the conquest cannot be underestimated: the impressive work of the navy, which had held the principal harbors and cruised the coast, and the use of sailors and marines from these ships as amphibious adjuncts to land-based military operations secured California for the United States.

In a proclamation issued four days later, Sloat declared that California was now US property, and that martial law would be in effect until civil authorities could be elected. But all was not secure: the American position at Los Angeles was abandoned on September 29, when Commander Archibald Gillespie surrendered and retreated to the merchant ship *Vandalia*. Though cleared for departure on October 4, they did not sail, expecting reinforcements to arrive shortly; an October 6 battle at Domingues Rancho proved unsuccessful, and forced the American reinforcements to retreat to their ships. The final recapture of Los Angeles, in fact, did not occur until January 1847. Thus ended the conquest of California: now, all American military leaders had to do was realize their ambitions in

65 See Conway B. Sonne, *Saints on the Seas: A Maritime History of Mormon Migration, 1830–1890* (Salt Lake City: University of Utah Press, 1983).

66 Sally Cavell Johns, "Viva los Californios!: The Battle of San Pasquale," *Journal of San Diego History* 19, no. 4 (1973), <http://www.sandiegohistory.org/journal/73fall/sanpasqual.htm>.

Texas and elsewhere in Mexico, and wait for the inevitable treaty that would finally deliver the territory to the United States.

When the Treaty of Guadalupe Hidalgo was finally signed in 1848, it accomplished what many Americans had long hoped for and what many Californians had long feared, what others had long hoped for, and what all expected: the transfer of that region to the United States.⁶⁷ The change in ownership significantly altered trade patterns throughout the eastern Pacific, as American attention shifted from Oregon southward. Almost immediately, California's population began to swell: in March 1847, three military transports brought nearly 600 people, recruited to "conquer and colonize California," to San Francisco Bay. While many of those aboard the War Department chartered *Susan Drew*, *Thomas H. Perkins*, and *Loo Choo*—men who had formerly served in Stevenson's New York Regiment and who had been chosen not just for their martial abilities but for their desire to remain in California after the cessation of hostilities—dispersed throughout the territory, enough remained in Yerba Buena that by war's end the population of that community stood at 1,000, roughly seven times what it had been in 1843.

As the largest settlement in the region, Yerba Buena benefited from the war: it served as headquarters for the American military effort, as home to the quartermaster, and as port-of-call to dozens of US-flagged whaling ships. Observers noted that as early as September 1846, the town had taken on a distinctly "American" feel:

It was very difficult for me to realize that I was many thousand miles from home, in a strange and foreign country. All the faces about me were American, and there was nothing in scene or sentiment to remind the guests of their remoteness from their native shores. Indeed, it seems to be a settled opinion that California is henceforth to compose a part of the United States, and every American who is now here considers himself as treading upon his own soil, as much as if he were in one of the old thirteen revolutionary states.⁶⁸

The city was poised for great things: at the close of the war, municipal leaders decided upon a series of steps that would meet the demands of their community.

A series of passed ordinances attempted to stem desertions from naval and commercial vessels. The new regulations licensed merchants and took steps to obtain sufficient revenue for public improvements—the first to be a municipal wharf for loading and discharging vessels. The means for raising funds, in addition to licenses and fees, was the sale of submerged real estate in Yerba Buena cove that had been granted to the town in 1847. In 1847, military Governor Stephen Watts Kearney held a "Great Sale of Beach and Water Lots" extending existing street lines far into the shallow cove. The sale of these "water lots" commenced in summer 1847, paving the way for the ultimate expansion of the town into the cove. The initial subdivision created 450 lots, "all contained between the limits of low- and high-water mark, and four-fifths were entirely covered with water at flood tide." While the level of maritime commerce was still modest, with fewer than ten vessels calling in 1848, the site "is known to all

67 Of course, such trepidations were not universally shared. Many of the most influential families of Mexican California—who had benefitted from decades of clandestine trade with American whalers and Boston traders—felt no real loyalty to the government and welcomed the change.

68 Bryant, *What I Saw in California*, 327.

navigators and mercantile men acquainted with the subject to be the most commanding commercial position on the entire eastern coast of the Pacific Ocean, and the town itself is . . . destined to become the commercial emporium of the western side of the American continent.”⁶⁹ Irish-born Jasper O’Farrell, a civil engineer schooled in the art of municipal planning in Chile, expanded upon Jacques Vioget’s earlier work and laid out a grid that would guide the growth of the city for the next century and a half. In an effort to cement the small town with the great bay in the minds of the international community, town leaders decided to change the name of their settlement, choosing San Francisco as the new moniker. It was a sound decision, and one that proves that perhaps, it is “all in the name.” On January 30, 1847, municipal fathers decreed:

Whereas the local name of Yerba Buena is unknown beyond the district; and has been applied from the local name of the cove on which the town is built. . . . Therefore, to prevent confusion and mistakes in public documents and that the town may have advantage of the name given on the public map, it is hereby ordained that the name of San Francisco shall hereafter be used in all official communications and public documents or records appertaining to the town.⁷⁰

There was much against San Francisco’s location (such as steep hills and wide tidal flats) that seemed to militate against its becoming the great port on the bay, but the presence of active, aggressive merchants and the adoption of the name of the bay for the village which had been called Yerba Buena, went far toward turning the flow of cargoes onto the beaches and later the wharves of San Francisco. Early rival Benicia, for example, quickly succumbed and took a minor place in the maritime history of the region despite being blessed with deepwater harbor that was several dozen miles closer to the goldfields.

While the renaming of the town and its geographic and demographic growth was news enough, of even greater importance was what would soon occur. If ever one needed proof that manifest destiny was divinely ordained, one need look no further than this: after 350 years of Spanish and Mexican rule, California produced no mineral strikes of any appreciable quantity, yet on January 24, 1848, just ten days before ratification of the Treaty of Guadalupe Hidalgo ended the Mexican American War, gold was discovered by Bear Flag Revolt participant James Marshall at a lumber mill located on the property of Swiss immigrant John Sutter. Where the Spanish had failed to find the fabled Seven Cities of Cibola, the Americans had stumbled across El Dorado. The resulting gold rush transformed California from colonial outpost to international entrepôt and ushered in a new era in California’s maritime history. As Bayard Taylor, a newspaperman in the employ of Horace Greeley wrote, “of all the marvelous phases in the history of the present, the growth of San Francisco is one which will most tax belief . . . its parallel was never known, and shall never be beheld again.”⁷¹ California would never be the same.

69 Robert J. Schwendinger, *International Port of Call: An Illustrated Maritime History of the Golden Gate* (Woodland Hills, CA: Windsor Publishers, 1984), 5.

70 Hittell, *History of the City of San Francisco*, 597.

71 Bayard Taylor, *El Dorado: Adventures in the Path of Empire* (Berkeley: HeyDey Books, 2000), 240.

The sleepy community of Yerba Buena, as seen by a contemporary in 1847. Shortly, the tranquility would be long forgotten.



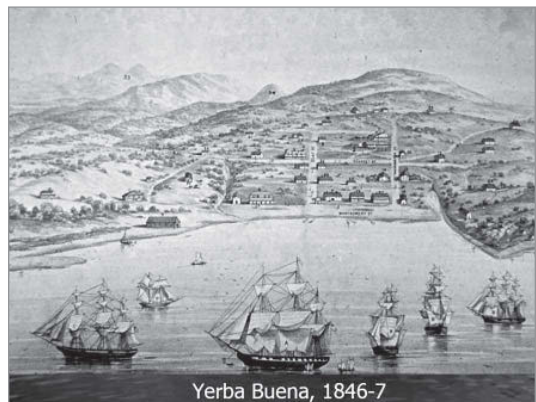
Courtesy San Francisco Maritime National Historical Park. A11.21850 pl.

The Russian settlement at Fort Ross represented the first shipyard in California, but was a serious threat to Spanish hegemony. This image of the Fort Ross pier, less than two hours' drive from San Francisco, was taken prior to 1890.



Courtesy San Francisco Maritime National Historical Park. Mercedes Pearce Collection. E11.19,044pl.

This image, drawn by William Swasey, depicts Yerba Buena cove and San Francisco just after the American capture, and prior to the gold rush. At anchor can be seen the sloop of war Portsmouth (center), hide-and-tallow trade ship Vandalia (left), and troop transports (née merchantmen) Loo Choo, Susan Drew, and Thomas H. Perkins.



Courtesy San Francisco Maritime National Historical Park. A11. 15695 pl.

The tidal mudflats of Yerba Buena cove are easily discernible in this image taken from an early panorama of San Francisco. The chaotic assembly of gold rush ships stand in marked contrast to the idyllic few of 1847.



Courtesy San Francisco Maritime National Historical Park. J. Porter Shaw Library, A11. 16541

Museum ship Lady Washington under sail in San Francisco Bay. A modern-day replica of one of the first American-flagged ships to call at West Coast ports, she is currently used for educational outreach.



Photo courtesy of author.

The most popular representation of the hide-and-tallow trade was furnished by Richard Henry Dana in his iconic *Two Years before the Mast*. Dana's work stimulated interest in California, and the work of his trading contemporaries seeded an American presence in the region.



Courtesy Hayward Area Historical Society.

CHAPTER 5

THE GOLD RUSH

The California gold rush was a movement of epic proportions, acting as a magic wand that transformed the western United States in ways few thought possible. Before the discovery of the precious mineral near present-day Coloma, few ventured to California save for fur trappers, whalers, and hide-and-tallow merchants on brief commercial ventures, or members of the US military, sent to defend far-flung outposts from real and potential dangers. Indeed, at the time of the transfer of California to the United States, fewer than 10,000 non-Native Americans lived in the territory, many of whom were military personnel remaining in the region following the conclusion of hostilities with Mexico. Those civilians that did go, moreover, tended to follow the Spanish model and hugged the coastline, never moving far inland where supply lines were tenuous and where the rugged natural landscape prevented any but the most resolute sojourner from making a home. All of this changed after 1848. In the succeeding years, merchants, entrepreneurs, and others made for San Francisco: in the words of one observer, “the world rushed in” to the greater Bay Area.¹ Most of the newcomers headed for the city of San Francisco rather than other communities (such as Benicia or Vallejo) that were closer to the goldfields, served by equally deep harbors and ship channels, and appreciably cheaper, proving that the decision to link Yerba Buena with the surrounding geography was a prudent one.

The impact on the maritime activity of the region was dramatic. In 1847, shipping on the Bay was limited to a trio of sloops: one managed by the Mormons to connect their San Francisco contingent to a settlement on the Stanislaus River; the second, the twenty-ton schooner *Sacramento*, owned by John Sutter and skippered by John Yates, which plied the waters between San Francisco and New Helvetia (near present-day Sacramento); and a smaller sloop that connected various enclaves throughout the region. During December 1847 and the first quarter of the following year, including coastwise craft, there were but fourteen arrivals, including one each from China and South America, and a third from the Sandwich Islands. For the year ending April 1, 1848, just four vessels departed Atlantic ports with cargo destined for San Francisco, and only eighty-six vessels (including four naval craft and eight New Bedford-based whalers fresh from the Sandwich Islands) were counted in the bay over that twelve-month period. Among these was the paddle steamer *Sitka*, which inaugurated steam navigation on the Bay (brought from Alaska aboard a Russian merchantman to collect hides, she floundered in the waters near Sacramento, and was beaten to Benicia by a team of oxen. Her chastened owners removed the engines, converted her to a schooner, and named her *Rainbow*).² The brig *Francisco* made history as the first commercial vessel to enter the Golden Gate after the Americans acquired the port, bringing a cargo of 1,000 tons of lumber to Benicia, but there was little fanfare or notice of the event. Indeed, for eighteen

1 J. S. Holliday, *The World Rushed In: The California Gold Rush Experience* (Norman: University of Oklahoma Press, 2002).

2 This failure did not dissuade others from trying. The first side-wheel steamer, the *Captain Sutter*, arrived in 1849, followed by *American Eagle* and others so that by 1854, a half-dozen steamers operated passenger service between San Francisco and the Sacramento Delta. See Nicholas P. Hardemann, “Overland in Cargo Ships: The Inland Seaport of Stockton, California,” *Journal of the West* (July 1981): 75–85.

months or so after the American conquest, there was only mild activity in the region: business slowed, no new troops arrived as warships were dispatched to other ports, and few immigrants moved to the area. An effort was made to solicit immigrants from Missouri (with an extra issue of the *California Star* appearing that spring) in the hope that this would push the population of the city past 800, but aside from that, there was little to suggest that migrants would soon overrun the port.

News of the strike at Sutter's Mill was slow in making its way across the continent. Although James Marshall first spied ore in the tailrace of a lumber mill in January 1848, news spread slowly. Reticence on the part of the first prospectors to share information about the strike was certainly one factor in delaying the gold rush, as was widespread disbelief on the part of those told of the discovery. Gradually, however, rumors gave way to substantiated stories and the rush was on. After President James K. Polk acknowledged the strike in his message to Congress of December 5, 1848, stating "the abundance of gold in that territory would scarcely command belief," thousands of self-styled Argonauts made for the goldfields of the Sierras.³ By March 1849, 17,000 had already embarked from East coast ports alone. In the year ending April 1, 1850, 63,000 Argonauts—an amazing 40,000 during the first eight months—arrived in the city on a variety of vessels.⁴ The gold rush, a defining moment in the development of the United States and an event of tremendous importance in California's maritime history, had begun.

Dozens of ships were soon arriving daily in San Francisco Bay, and hundreds of thousands passed through the city en route to the Sierra Nevada foothills. Those who came were relentless in the pursuit of profit, gold fever having a powerful hold on all who participated. A group of mostly young, overwhelmingly uneducated males descended on California in search of the mythical El Dorado. The demographic composition of this group made for a harsh existence: a violent, rough-and-tumble "man's world" existed from the moment they set out, and very few influences could temper these masculine emotions, either aboard ship, on the trail across North America, or in California itself. Decrying the city's woefully skewed gender ratio, the *Alta California* reported in 1849 that during July that year, 3,614 immigrants came to San Francisco by sea, and just 49 were of the fairer sex.⁵ Indeed, not until the mid-1850s would women compose more than 10 percent of the nonnative population of California. Despite the striking gender imbalance, by 1852, only a half-decade removed from the time when it could boast but three hundred inhabitants, San Francisco

3 Quoted in Gary Kinder, *Ship of Gold in the Deep Blue Sea* (New York: Atlantic Monthly Press, 1998), 7.

4 James P. Delgado, *To California by Sea: A Maritime History of the California Gold Rush* (Columbia: University of South Carolina Press, 1990), 19. For the twenty-month period between April 1849 and December 1850, there were 1,431 arrivals, for a monthly average of 72. In September 1849 alone, 128 arrived. Monthly vessel arrivals in San Francisco from April 1849 to December 1850 were as follows: 64, 43, 74, 93, 112, 128, 90, 82, 89, 55, 46, 54, 50, 75, 85, 62, 54, 39, 49, 55, and 32.

5 *San Francisco Alta California*, August 2, 1849. For the role of gender in the making of the American West, see Michelle E. Jolly, "Inventing the City: Gender and the Politics of Everyday Life in Gold-Rush San Francisco, 1848–1869" (PhD diss., University of California, San Diego, 1998). See also JoAnn Levy, *They Saw the Elephant: Women in the California Gold Rush* (Norman: University of Oklahoma Press, 1992). An interesting first-person account can be found in Lynn A. Bonfield, ed., *From New England to Gold Rush California: The Journal of Alfred and Chastina W. Rix, 1849–1854* (Norman, OK: Arthur H. Clark and Company, 2011).

claimed 255,000 residents, the city springing from the sea like a modern Atlantis.⁶

William Leidesdorff

Among the most interesting figures active in early California was William Alexander Leidesdorff. Born to an Afro-Cuban mother and Danish Jewish father in St. Croix, Virgin Islands, in 1810, Leidesdorff's career epitomizes the mutability of race in maritime California and the struggles endured by persons of color along the frontier of nineteenth-century America. Leidesdorff immigrated to New Orleans at age twenty-four, becoming an American citizen at the same time. He was an active merchant and held a master's license, being the last person of color to command a vessel out of New Orleans before the enforcement of that city's Negro Seaman Acts. He eventually relocated to California, arriving in Yerba Buena in 1841, as master of the schooner *Julia Ann*. He adopted Mexican citizenship three years later.

Upon his arrival in Yerba Buena, Leidesdorff made an immediate impact. He operated the first steamer on the bay, opened a number of hotels and warehouses, and acquired a 30,000-acre ranch on the American River. Branching out to Pacific commerce, he established extensive commercial relations with Hawaii, and was one of the first sugar merchants in the city (his father, incidentally, had been a sugar merchant in the Caribbean). Following the transfer of California to the United States, Leidesdorff served as alderman of San Francisco, was elected city treasurer and sat as a member of the inaugural school board. He also served as US vice consul to Mexico, the only such individual to hold that title. His business fortunes increased following the discovery of gold, since his extensive landholdings near Sacramento contained prodigious quantities of the ore. By this time, he was one of the wealthiest individuals in the region, with extensive landholdings in what is today the financial district of San Francisco. Regrettably, Leidesdorff never enjoyed his fortune: he died of brain fever on May 18, 1848. He is interred at Mission Dolores.

Leidesdorff never married and had no heirs. His estate eventually transferred to the State of California, and to a business associate, Joseph Folsom. As harbormaster and collector of customs for the Port of San Francisco, Folsom was well aware of Leidesdorff's fortunes. Taking leave from the army, he traveled to St. Croix where he purchased the deed to Leidesdorff's California holdings from his parents for a mere \$75,000. Though challenged in court, the uncertainty of probate laws, the complicated nature of a case involving dual citizenship, and the inadmissibility of testimony from Leidesdorff's family (since persons of color could not testify in a court of law) meant that Folsom was able to retain most of what he now claimed as his own property.

Leidesdorff Street in San Francisco is among the only notable memorials to this legendary man.

6 Interestingly, among the first to hear of the strike and arrive in San Francisco were a sizable number of Anglo-Chileans, who, having the advantage of geography on their side, would arrive several months before the Americans. By December 1849, 92 of Chile's 119 registered ships lay within the confines of San Francisco Bay. The influence of these South American Argonauts could be seen in the establishment of a neighborhood known as "Little Chile" located in present-day North Beach, the names bestowed upon various Bay Area features, and, more tellingly, in the rash of anti-Latin violence that swept the city upon the arrival of subsequent waves of miners. See Jay Monaghan, *Chile, Peru, and the California Gold Rush of 1849* (Berkeley: University of California Press, 1973); and Edward D. Mellilo, "Strangers on Familiar Soil: Chileans and the Making of California, 1848–1930" (PhD diss., Yale University, 2006).

Setting out from the East Coast in the winter of 1848–1849, early gold seekers found their transcontinental progress slowed by snow-packed mountains, ice-clad passes, turbulent rivers swollen with rainwater, and dangerously flooded plains. Still, in that first year some 23,000 made the overland trek, and by the end of that year, California's nonnative population grew to 100,000. By December 1849, California held elections, drew up a constitution, and petitioned Congress for admission to the Union as the thirtieth state, a step formalized on September 9, 1850.⁷ Never before had a territory met the provisions for statehood so quickly. Another 45,000 made the transcontinental trek, which could take anywhere from five to eight months, the following year, but for others—the majority—the overland journey was too dangerous, and above all else, too slow.⁸

In reaching the goldfields, fortune favored the swift: entrepreneurs searched for the quickest ways to bring passengers and eclectic, speculative cargo to the goldfields, employing everything from steam technology to vessel designs that maximized speed under sail. Many, therefore, braved the North Atlantic winters as they pushed off from New England ports bound, around Cape Horn, or across the Central American isthmus, to the goldfields. This was a baptism by fire, as many who had never gone to sea received their first introduction to the watery world in the form of winter gales and nor'easters. Thus, the gold rush was largely a maritime phenomenon, with far-reaching effects as tens of thousands of persons—many of whom had no prior seagoing experience—made for California by ship.⁹ Pooling their resources in joint stock companies that similarly peopled New England two centuries earlier, migrants tried to live aboard as they had ashore, but this was difficult as they shared their living quarters with livestock, eclectic goods destined for the markets of San Francisco, and others with a dream of striking it rich. “Not since the crusades,” said newspaper editor J. D. B. Stillman, “had such an assemblage of people gone to sea.”¹⁰

As historian James Delgado showed in his seminal *To California by Sea: A Maritime History of the California Gold Rush*, the strike at Sutter's Mill had tremendous maritime implications. Namely, it integrated the Pacific territories with the rest of the United States in a new and more intimate manner. Prior to the gold rush, the territories of California and Oregon were cut-off and far removed from happenings in the Midwest or on the Atlantic seaboard. Now, they were closely connected. In 1847, Congress agreed to establish and subsidize a mail service to bind the Pacific coast to the rest of the country, a need made manifest by the Mexican War. The service would operate in two legs: one would link New York and other eastern ports with Chagres, on the Atlantic coast of Panama.¹¹ After an overland mule-and-canoe portage covering the forty or so miles of thick underbrush

7 Fittingly, news of that event was transmitted to California by the Pacific Mail steamer *Oregon*, which trumpeted the news from its banner upon arriving on October 18, 1850.

8 Of course, emigrants from Europe or Asia had no choice but to venture to California via maritime routes. Oscar Lewis, *Sea Routes to the Gold Fields: The Migration by Water to California in 1849–1852* (New York: Alfred A. Knopf, 1949).

9 One observer described the typical Argonaut as a “brave, thoughtless lad . . . bound for a hard, alien life. Death and disease claimed them in every port and their wreckage marked every league of the 17,000 miles of their journey.” Quoted in Bill Bonyun and Gene Bonyun, *Full Hold and Splendid Passage: America Goes to Sea, 1815–1860* (New York: Alfred A. Knopf, 1969, 160).

10 Quoted in J. S. Hittell, *A History of the City of San Francisco* (San Francisco, 1878), 131–32.

11 Alternate routes, such as via Cape Horn or overland from the Midwest were dismissed as being too time-consuming or dangerous. For Cape Horn, see Raymond A. Rydell, *Cape Horn to the Pacific* (Berkeley: University of California Press, 1952).

and sometimes impassable rivers, the journey was completed via a steamship connection between Panama City and San Francisco, often with intervening stops at ports such as San Blas, Manzanillo, or Acapulco. That route, maintained by the Pacific Mail Steamship Company (PMSSC), was granted to William H. Aspinwall and associates, of the firm of Howland and Aspinwall, while the Atlantic leg was operated by the United States Mail Steamship Company (the two rivals would merge in 1851).¹² At an initial cost to taxpayers of \$199,000 per annum (raised to \$348,250 per annum in 1852, the first of several adjustments), one can see how highly valued was a communications connection with the Pacific coast. The owners, operators, and investors of these companies could not have asked for a more propitious turn of events: from the outset of the discovery of gold in California, conditions were radically different from what the company expected. The Pacific Mail side-paddlewheel steamers *California*, *Oregon*, and *Panama*, ranging between 1,050 and 1,100 tons, slipped down the ways and into service at almost the same time word of the gold strike was reaching the ears of eager Americans. Departing New York on October 6, 1848, the first PMSSC ship arrived on the Pacific coast port of Panama City in mid-January of the following year, deluged by hordes of gold-seekers then descending on that region.¹³ When *California* arrived in San Francisco on February 28, 1849, she disembarked 365 passengers, several times her design capacity: her entire crew of 34, with the exception of the captain and an assistant engineer, fled for the goldfields.¹⁴ One correspondent described the scene:

The *California* is truly a magnificent vessel, and her fine appearance as she came in sight of the town called forth cheer after cheer from her enraptured citizens, who were assembled in masses, upon the heights commanding a view of the bay and in dense crowds at the principal wharves and landing places. She passed the vessels of war in the harbor under a salute from each, returned by hearty cheering from the crowded decks and was safely moored at the anchorage off the town.¹⁵

It was clear that the PMSSC would need more than their initial trio of vessels to serve this vast new clientele. Soon, an entire flotilla of ships, growing to eighteen in just five years and nearly two dozen by 1869, began service. The vessels included *Unicorn* (purchased from British interests), *Tennessee* (removed from service as a coastal steam packet on the Gulf Coast), and the 2,100-ton *Golden Gate* (a 270-foot vessel lost with 233 lives in a spectacular

12 When the contract was finally signed on November 16, 1847, it was originally awarded to a Tennessee politician who had secured passage of the bill. He held it for three days before selling it to Aspinwall in what can only be described as “business as usual” for mid-nineteenth century politicians. On Aspinwall, see Duncan S. Somerville, *The Aspinwall Empire* (Mystic, CT: Mystic Seaport Museum, 1983). On Pacific Mail, see Stephen J. Potash and Robert J. Chandler, *Gold, Silk, Pioneers, and Mail: The Story of the Pacific Mail Steamship Company* (San Francisco: Friends of the San Francisco Maritime Museum Library, 2007); and John Haskell Kemble, “A Hundred Years of Pacific Mail,” *American Neptune*, 10 (1950): 123–43.

13 *California* and *Panama*, built by William Webb, and *Oregon*, built by Stephen Smith and John Dimon, all ran about 220 feet, with a 34-foot beam. They featured accommodations for 75, from first class to steerage.

14 *California* carried a second set of engine parts on her inaugural run, anticipating that such components would be unavailable at any point on the Pacific Coast. Victor M. Berthold, *The Pioneer Steamer California: 1848–1849* (Boston: Houghton Mifflin, 1932).

15 *Daily Alta California*, February 28, 1849.

1862 wreck).¹⁶ The 1,200-ton twins *Republic* and *Northerner* and smaller craft such as *Columbia*, *Antelope*, *Carolina*, *Columbus*, *Fremont*, and *Isthmus* rounded out the fleet. By first supplementing and then supplanting the mail service as their primary raison d'être, the steamers, charging \$200 for steerage and \$315 for first-class passengers, and \$100 per ton for freight, were able to bring investors handsome annual returns.¹⁷ In 1850, PMSSC paid its first dividend at 50 percent; returns hovered near 20 percent for the next few years, and averaged between 10 percent and 30 percent per annum until after the Civil War.¹⁸ Opponents of federal subsidies would not forget these figures, and competitors also took notice.

Despite cries that the government should not underwrite the cost of a private venture, Pacific Mail prospered and soon developed several competitors. Despite merging with the US Mail Steamship Company in 1851, the PMSSC faced serious competition from such upstarts as the Empire City Line (1850), the New York and San Francisco Steamship Line (1852), and the Central American Transit Company (1862–1868). In fact, there were not many months that Pacific Mail did not find itself in more or less active war with these rivals.¹⁹ None, however, posed as large a threat as Cornelius Vanderbilt's Nicaragua Transit Company (1851–1865). The self-proclaimed Commodore opened the Atlantic and Pacific Steamship Line in 1851. By the following year, he operated seven steamers—including the original trio of *Prometheus*, *Independence*, and *Pacific*—on that route (though longer than the Panama route, Nicaragua had a better climate, and the presence of Lake Nicaragua made water transportation—rather than wagon train or mule pack—possible for most of its length). In its first half decade in operation, the Nicaraguan route saw business steadily increase, with 4,971 Argonauts opting for Vanderbilt's route in 1851, 17,403 in 1852, and nearly 24,000—or almost 50 percent of all isthmian traffic—in 1853. Unfortunately for Vanderbilt, a reputation for poor service (the line lost several vessels in high-profile accidents) and an unstable political situation in Nicaragua (aggravated by American filibusters such as William Walker) eroded many of these gains, and by 1856, fewer than 8,000 of the nearly 40,000 isthmian travelers opted for his route.²⁰ Despite these issues, Vanderbilt was

16 The SS *Tennessee* was wrecked on March 6, 1853, four miles north of the Golden Gate in Marin County. See Fred Stocking, "How We Gave a Name to Tennessee Cove," *Overland Monthly* 17 (April 1893): 351–57. *Golden Gate*, with room for 800 passengers, set the record for speed, covering 290 nautical miles in one day, averaging more than 12 knots, but consuming more than 60 tons of coal. She went down off the Mexican coast on June 27, 1862.

17 Mail delivery remained an important component of the company's business, and steamer arrivals excited considerable enthusiasm. The *Alta California* of August 28, 1854, remarked that "the people of California and San Francisco seem to count time from Steamer Day to Steamer Day." On September 29, 1864, *Golden Age* arrived with some 70,000 pieces of mail, the "largest ever received on the Pacific Coast" according to that day's *Alta California*. As late as December 19, 1865, that same journal noted, "Steamer Day is still a great event . . . people spend the night before writing letters."

18 Potash and Chandler, *Gold, Silk, Pioneers and Mail*, 9.

19 Of these, most were forced into ruin. Between 1848 and 1851, at least 36,097 made their way to California via the isthmian routes. In the two decades following the discovery of gold, 808,769 crossed the isthmus. Delgado, *To California By Sea*, x.

20 The real draw of the isthmian crossing—with a four-hour transit utilizing some 47.5 miles of railroad tracks—was in the return voyage, since few who came to California via the Horn or overland returned that way. Construction of the railroad was said to have claimed 6,000 lives, or "one for every wooden railroad tie laid." On the isthmian route, from a firsthand perspective, see Olive Colegrove Cole, "To California via Panama in 1852," *Annual Publications of the Historical Society of Southern California* 9 (1914): 163–72; and James Miller Guinn, "To California via Panama in the early '60s," *Annual Publications of the Historical Society of Southern California* 5 (1900): 13–21.

able to wrangle concession from Pacific Mail to the tune of \$56,000 per month to guarantee that he would not open competing lines on the Panama route.²¹

Prospective miners had a number of options to get them to the goldfields. The aforementioned overland trek was long (a typical crossing averaged six months and could take as long as eight to cover the 2,000 miles between St. Louis and San Francisco) and dangerous (hostile natives, the risk of dysentery and other illnesses, drought and starvation). Maritime routes were clearly a better, though more expensive, option. The first routes to be developed were the runs around Cape Horn. Departing in winter (so that the perilous crossing would occur in the southern hemisphere's summer) the 13,328-mile sea route could take as long as two hundred days. The oceanographic and meteorological knowledge passed on by Matthew Fontaine Maury, a US Navy scientist who compiled statistics from tens of thousands of whaling and commercial voyages, reduced this time by some two months. Advancements in naval architecture—particularly the development of the clipper hull—would shave another forty to fifty days off the run, but the voyage was a costly financial venture. Those with the funds to spare got to the diggings in relative speed (and comfort if they upgraded their accommodations) compared to the terrestrial gold seekers, who were more likely to be from the lowest socioeconomic realm. Others could take a combined sea-terrestrial journey, shipping from East Coast or Gulf Coast ports for various ports in Latin America and continuing overland to the Pacific. From here, getting to “the city” (and that was all one had to say to be guaranteed delivery to San Francisco) entailed another maritime leg, usually by steamer to California. Participants raved about the speed: “We was only eight days from New York [on the *Moses Taylor*] to our first landing place the Isthmus, and met with good luck to take the railroad cars in three hours or a little more, and in about four hours we got across the isthmus to Panama, where we got rite on the boat [*Golden Gate*] and sailed rite through without delay.”²² The 500 passengers made this journey in twenty-one days, twenty-two-and-a-half hours, from wharf to wharf, being the shortest passage made from New York.²³

While the overland portage was slow and tedious, with illness (yellow fever, diphtheria, and other tropical diseases), animal attack (jaguar, alligator), and other dangers (highway robbers and unscrupulous agents), the time elapsed could be as much as two-thirds less than that spent in a voyage around the Horn, with the combined 5,000 miles covered in some three weeks. Many were stranded in places as varied as Mexico, Panama, and Nicaragua, awaiting transit to the goldfields; many an impoverished prospector abandoned hope of ever seeing California and turned instead to providing services—hotels, saloons, and the like—to others in a better position to continue the voyage.²⁴ In some cases, desperate Argonauts agreed to pay for their passage by working aboard San Francisco-bound ships; others, despondent by their chances, chose a life of crime or ended their days in the dismal surroundings where they found themselves.

21 By 1860, Pacific Mail had bought Vanderbilt's West Coast steamers, though he continued to run his Atlantic fleet until his retirement in 1865. On the Nicaragua route, see David I. Folkman, Jr., *The Nicaragua Route* (Salt Lake City: University of Utah Press, 1972).

22 Cited in Potash and Chandler, *Gold, Silk, Pioneers and Mail*, 4.

23 *Daily Alta California*, February 27, 1858.

24 John M. Letts, *California Illustrated; Including a Description of the Panama and Nicaragua Routes*, (New York: R. T. Young, 1853), 134. The best treatment of the Panama Route remains John Haskell Kemble, *The Panama Route* (1943; reprint, Columbia: University of South Carolina Press, 1999).

To meet the demands for shipping needed to bring prospectors, entrepreneurs, and others to California, it seemed that any and every vessel from Maine to Texas was pressed into service. A motley collection of ships, barks, brigs, schooners, and steamers that included many older vessels languishing for lack of trade and a good many rotting and condemned hulks—"less than stout and without the bloom of youth"—were commandeered.²⁵ In addition to this assorted flotsam of ships that could barely be kept afloat was added a large number of relatively new vessels, the construction of which harkened a booming maritime economy for the shipyards of New York, Boston, and Mystic, among other New England or Middle Atlantic yards. Fishing schooners and whaleships were hastily converted and others were responsibly refit; by one estimate, 10 percent of the American whale fishery was diverted into ferrying passengers and goods to California. The gold rush, then, had far-reaching and deep implications for people across the nation and around the globe, and virtually all of these traced their maritime connection to San Francisco.

One often-retold incident is that of the whaler *Niantic*, captained by Henry Cleaveland of West Tisbury, Martha's Vineyard. At 451 tons and 119 feet, the three-masted, full-rigged ship was slow, bluff-bowed, and built "for great gain and no loss" for the firm of Griswold and Company of New York in 1835.²⁶ Named for a tribe of Rhode Island Indians, she was built of oak and pine at Chatham, Connecticut, by Thomas Child and was originally designed for the China trade, carrying tea and silk from the Orient to New England. On one voyage, her master, Captain Levy Doty became so ill that command of the ship passed to Robert Bennett Forbes, originator of the China trade and scion of the great American trading family. During the 150-day passage home, Forbes described *Niantic* as "rather shaky, not fast, quite crank, and not over well found."²⁷ In other words, she was perfect for the whale fishery.

Having fished the whaling grounds of the Atlantic since at least 1844, *Niantic* was sold to Burr and Smith of Warren, Rhode Island, in 1847 and was on its maiden voyage to the South Seas when it stopped in South America for refitting. Upon hearing of the gold strike, *Niantic* hastened from its anchorage in Paita, Peru (where it had been transferred to the Chilean registry), and headed to California. Before departing, she loaded 2,000 board feet of lumber and assorted quantities of bedding and foodstuffs; converted underway, she arrived at Panama on April 7. Cleaveland and his sons (who sailed as first, second, and third mates) found thousands in search of passage to the goldfields, and many offered exorbitant sums for tickets to California. Cleaveland recognized a good thing when he saw it, picking up 249 passengers (whom he charged \$150 for steerage and \$250 for a cabin, on a strictly first-come, first-served basis), converting the try pots into soup tureens, and proceeding to San Francisco through the Golden Gate (sixty-six days later and having lost one passenger to illness) on July 5, 1849. Among those who survived the passage were a future judge, a minister, a craftsman, and four slaves and their masters, all of whom quickly made for the Sierra foothills. They were not alone, as virtually all her crew deserted her as well.

With *Niantic*'s crew gone to the Sierras, Cleaveland decided to run the ship aground and offer it for sale. Advertisements were placed in the August 9 *Alta California*, and she found a purchaser in Adolphe Mailliard and Samuel Ward, a pair of local real-estate

25 Delgado, *To California by Sea*, 24.

26 Delgado, "No Longer a Bouyant Ship," 322.

27 Delgado, "No Longer a Bouyant Ship," 323.

speculators. They had short cables placed under her keel and attached on either side to large casks, partially filled with water. The liquid was gradually siphoned out and the casks raised her a bit, and she floated well up onto the beach at the northwest corner of Clay and Sansome Streets. Her masts removed, her ballast jettisoned, pilings were hammered alongside the ship's starboard quarters to stabilize the structure; the ship's pump provided access to a spring, which provided the "best water in San Francisco." Her side was pierced with a door, above which hung a sign proclaiming, "Rest for the Weary and Storage of Trunks." Exactly one month after posting of the ad announcing her sale, she opened for business as a storeship and boardinghouse. Accessible on three sides by water (Maillaird having purchased all the adjoining water lots), lighters continually streamed by the facility, netting the owners some \$20,000 per month.²⁸ British miner William Kelly described the scene: "a fine vessel of 1000 tons was no longer a buoyant ship but a tenement anchored in the mud, covered with a shingle roof, subdivided into stores and offices."²⁹ *Niantic's* fate was not novel: by 1852, the harbor master concluded that 164 ships served as permanent structures of the city's waterfront.³⁰ Indeed, many of the pioneer buildings in the city were ships converted into floating warehouses, offices, or jails, or served in countless other capacities.

On May 4, 1851, the worst of four eventual fires consumed much of the city. Raging until it ran out of fuel, the blaze destroyed *Niantic's* topsides and hull, destroyed solid (and supposedly fireproof) walls, melted glass bottles, warped thick iron doors and shutters, and claimed the lives of those who had run inside to escape the conflagration. (Subsequent excavations in 1872 "turned up the floors and there was the hulk of the *Niantic* . . . replete with 35 baskets of wine and champagne, still . . . of very fair flavor.")³¹ The smoke was reportedly seen over 100 miles away in Monterey, but it did not dissuade Ward and Maillaird from their business. In less than five months, *Niantic* reopened, this time, as a hotel. The *Daily Herald* described the new structure: "Its parlors are spacious and tastefully appointed while the sleeping rooms are airy, neat, and pleasant. The structure will be amply supplied with every substantial and luxury which the market affords, and the choicest wines and liquors will always be found at the bar."³² Regrettably, over the next two decades (and four owners), the *Niantic* Hotel declined from this auspicious start and became the preferred destination of shady characters, criminal activities, and ne'er-do-wells associated with the Barbary Coast. As the one that was drawn furthest inland from the original coastline, she remains the most famous vessel of gold rush San Francisco, the most documented in both words and images. Rediscovered in 1978, her remnants still lie beneath the redwood park that abuts

28 Early in its history, the site had housed a four-story reinforced concrete office building, built by Lorenzo Scatena, a produce merchant and grandfather of A. P. Gianini, founder of the Bank of America. The 1906 earthquake and fire destroyed that structure; an undated newspaper article thought to be from about 1915 erroneously reported that there was nothing left of *Niantic*, as did a bronze plaque erected in 1918 by the Native Sons of the Golden West. Isabel Bullen, "A Glimpse into the *Niantic's* Hold," *California History* 58, no. 4 (1980): 326–33.

29 William Kelly, *A Stroll through the Diggings of California* (London: Simms and M'Intyre, 1852), 177.

30 William H. Pickens, "A Marvel of Nature; The Harbor of Harbors,' Public Policy and the Development of San Francisco Bay, 1846–1926" (PhD diss., University of California, Davis, 1976), 17.

31 See James P. Delgado and Russell B. Frank, "A Gold Rush Enterprise: Samuel Ward, Charles Mersch, Adolphe Maillard, and the *Niantic* Storeship," *Huntington Library Quarterly* 46, no. 4 (Autumn 1983): 321–30. See also Mary Hildermann Smith, "An Interpretative Study of the Collection Recovered from the Storeship *Niantic*" (master's thesis, San Francisco State University, 1981).

32 *San Francisco Daily Herald*, October 4, 1851.

San Francisco's iconic TransAmerica building.³³ *Niantic*, like other submerged cultural resources, offers an opportunity to more accurately assess the historical milieu that is maritime San Francisco. Devoid of biases and perspectives, her cargo holds reveal a moment captured in time, a moment that allows contemporary scholars to better understand the role that shipping and commerce played in earlier days. Far more than staid textbooks or static displays in dusty museums, artifacts such as *Niantic* allow twenty-first century observers to better appreciate the past.

The rush to California was clearly one of the reasons why the period from 1815 to 1860 has been declared the "golden age of American maritime history," leading to one of the most dramatic and iconic images of all American history, the clipper ship. Clippers represented the apex of American seafaring at a time of tremendous interest in that activity in the United States.³⁴ Described as being virtually built for San Francisco and the gold rush, the clipper was uniquely well designed and situated for the run around Cape Horn from the East Coast.³⁵ While there were fast ships in operation before the clippers burst onto the scene, they were all small (the average tonnage of vessels in San Francisco Bay in 1850 being 274); by comparison, *Flying Cloud*, launched on April 15, 1851, was 1,782 tons. Vessels that entered through the Golden Gate with any commodity then in short supply commanded fabulous prices, and so-called Yankee clippers often paid for themselves in just one trip. With eggs selling for a dollar apiece and whiskey fetching \$40 a quart, there was a definite advantage in getting to California quickly. Experience showed that the most profitable type of vessel was a large, fast, full-rigged ship available for carrying cargoes to San Francisco, then (in ballast) to China for tea to London or New York. The clippers delivered on all counts. At a time when the average passage around Cape Horn was 182 days, they accomplished it in 130.

Employed in long-distance trade, the clippers would be a short-lived phenomenon; their small cargo capacity offset by the cost of maintaining an absurdly large crew needed to handle the ship. With a large sail area—including studding sails, water sails, and other

33 The remains were first discovered by workmen who struck the remains of the ship on April 28, 1978. At that time, only 90 of her 120 feet were explored. James P. Delgado, "No Longer a Buoyant Ship: Unearthing the Gold Rush Storeship *Niantic*," *California History* 58, no. 4 (Winter 1979/1980): 316–25. For all her notoriety, *Niantic* was by no means the only well-known "beached ship." See, for example, James P. Delgado, "Ships as Buildings in Gold Rush San Francisco," *Mariner's Museum Journal*, second series, no. 1 (1995): 4–13. On December 17, 1849, the 627-ton *Arkansas*, launched in 1833, entered the Bay after a lengthy voyage from New York (she had departed that city on June 26). With 107 passengers and 16 crew, her 145-foot-long decks were crowded; but soon emptied as all made off for the Sierras. Beached at Pacific and Battery she was purchased by Henry Klee, and "her forecastle was used as a tavern . . . a door cut bluff in the bow admitted the thirsty. In three paces you step from the street into her foc'sle . . . the ale served on draught was unequalled in the city, whilst the liquors were the purest and best" (David Hull, "The Old Ship Saloon: A Door in Her Bow Admitted the Thirsty," *American West* [1974]: 22–23).

34 As an example, in 1848, the American clipper *Memnon* had passed the steamship *Europe* during a passage to Liverpool, garnering much publicity and great fanfare; in 1851, the yacht *America* won the Royal Yacht Squadron Cup, while the Collins liners were shattering speed records across the Atlantic, much to the dismay of their rivals, Cunard. See John A. Butler, *Atlantic Kingdom: America's Contest with Cunard in the Age of Sail and Steam* (Washington, DC: Brassey's, 2001). Other manifestations of maritime activity during this time can be found in the growing network of inland waterways, and the continuing increase in coastwise trade and travel.

35 Of the estimated 10,000 runs around Cape Horn from the East Coast to the West, only 26 were accomplished in less than 100 days. See Nicholas Dean, *Snow Squall: The Last American Clipper* (Gardner, ME: Tilbury House Publishers, 2001).

accoutrements designed to catch every available breeze—passages dropped from 125 days to 89.5, a record that the stately *Andrew Jackson* kept for nearly 150 years. Their design, a modification of blockade runners developed along the Chesapeake and northern New England coasts during the Jeffersonian Embargo of 1807 and the War of 1812, allowed for speeds routinely surpassing twenty knots, and California-bound clippers set the record for most nautical miles covered in a twenty-four-hour period. Possessing fine-lined hulls and emphasizing streamlined shape, clippers were known for featuring miles of line and acres of canvas. With a long bowsprit and a keel that knifed through the water, clippers sacrificed carrying capacity for speed. With poetic names (*Herald of the Morning*, *Witch of the Wave*, *Sovereign of the Seas*), sharp lines and consummate seamanship, they captured the public imagination. As Samuel Elliot Morrison, doyen of American maritime historians, put it: Never, in these United States, has the brain of man conceived, or the hand of man fashioned, so perfect a thing as the clipper ship. In her, the long-suppressed artistic impulse of a practical hard-worked race burst into flower . . . but they were monuments carved from snow . . . for a brief moment of time they flashed their splendor around the world, then disappeared with a sudden completeness.”³⁶

The speed clippers attained was often phenomenal and the subject of intense debate. In December 1854, *Champion of the Seas* claimed to run 465 nautical miles in 24 hours (averaging 19 knots); others were equally impressive: *Lightning* (19 knots); *Great Republic* (19 knots); *Defiance* (20 knots) and *Sovereign of the Seas* (22 knots).³⁷ Yet theirs was an ephemeral history. The clippers were never numerous (from 1843 to 1855 American shipyards turned out 2,656 vessels, only 256 of which were clippers), and their span was brief. The era of the clipper ship can be said to commence with the maiden voyage of *Sea Witch* in 1846 (a trip that took her around the Horn to California in under 100 days) and her wreck on a Cuban reef in 1856 marking its end. (Some historians point to the launching of the appropriately named *Twilight* the following year as the true endpoint.)

The story of the 2,000-ton *Challenge* is illustrative. Promised a \$10,000 bonus if he could deliver his cargo to San Francisco in less than ninety days, Captain Robert Waterman was understandably determined to make haste for California. Featuring skysail yards at 200 feet above the waterline and a 160-foot spread of canvas (some 60 feet beyond the rails on each side), the clipper was well designed to meet the three-month threshold. Regrettably, the lack of experienced sailors—many had already abandoned the blue seas for the gold hills—meant that Waterman was relying on a young and green crew to accomplish this task. Undeterred, the captain believed he could teach his charges by instilling fear. When *Challenge* arrived in San Francisco in 108 days, the master was brought up on charges of cruelty and eventually tried for murder. This experience was not uncommon. A letter to the *New York Tribune* revealed this:

36 Samuel Elliot Morison, *Maritime History of Massachusetts, 1783–1860* (New York: Houghton Mifflin, 1921), 370–71. On clipper ship construction and the yards that built these craft, consult Edwin L. Dunbaugh and William DuBarry Thomas, *William H. Webb: Shipbuilder* (Glen Cove, NY: Webb Institute of Naval Architecture, 1989). An excellent source is William L. Crothers, *The American-Built Clipper Ship, 1850–1856: Characteristics, Construction, and Details* (New York: McGraw-Hill, 2000).

37 For a good treatment of clippers, see Melvin A. Conant, *Heralds of Their Age* (New York: South Street Seaport Museum, 1972); and C. C. Cutler, *Greyhounds of the Sea: The Story of the American Clipper Ships* (New York: Naval Institute Press, 1930). See also Michael Jay Mjelde, *Clipper Ship Captain: Daniel McLaughlin and the Glory of the Seas* (Palo Alto, CA: Glencannon Press, 1997).

Such a set of sailors as this there never was before in any ship in this wide world . . . out of 56 men, only 10 Americans. There are 12 Englishmen, 20 Irishmen, 5 Dutchmen, 4 Frenchmen, 3Italians, 1 Swede, 1 Russian. Now, maybe you wouldn't believe it, but I tell you it is the honest truth, out of the 10 Americans, 7 of them are boys . . . we have lost 8 men. Three fell overboard and five died since; there were 17 sick at one time. When we get to San Francisco, I expect that all of our crew will leave and run away.³⁸

Most clippers, incidentally, carried few passengers, as the high fares more than offset the advantages to be gained by getting to California quicker than competitors. In the six-month period between June and December 1852, the eleven clippers calling at San Francisco averaged but five passengers, and none would ever call therewith more than 67 aboard. What the clipper did offer was a guarantee that high-duty freight would arrive at its destination clean and in good order. Despite freight rates running as high as \$15 per ton, square-riggers continued to control the intercoastal cargo business until the turn of the twentieth century—though not at such high freight rates—when steamers and eventually transcontinental railroads, replaced them as models of elegance and efficiency.

The news of the gold discovery brought newfound interest in California. Whereas previous American curiosity was reserved for the military or the odd fur or hide trader, now there was widespread fascination in the region. Walter Colton, mayor of Monterey, wrote to a colleague in Philadelphia, taunting that, “while your streets have minnows, ours are paved with gold.” Relating the allure that the Sierra goldfields held for the residents of his city, young and old, healthy and infirm, Colton added: “the blacksmith dropped his hammer, the carpenter his plane, the mason his trowel, the farmer his sickle, the baker his loaf, and the tapster his bottle . . . all were off for the mines. Some rode horses, others carts . . . some were on crutches and one was in a litter.”³⁹ A cursory look at shipping lists and assorted data and statistics proves this: on December 1, 1848, New York newspapers carried advertisements for 6 vessels destined for San Francisco.⁴⁰ Less than two weeks later (and just one week after President Polk's proclamation) that number had risen to 27. For the year ending December 1, 1849, some 762 sailing vessels cleared East Coast ports for the goldfields, while New York, with 214, would send the most ships to San Francisco, she was joined by virtually every other port of appreciable size: Philadelphia, Boston, New Orleans, Baltimore, New Bedford, and dozens more sent ships to California. Two hundred forty two ships, 218 barks, 170 brigs, 132 schooners, and 15 steamers replaced the 8 that had departed from Atlantic ports for the Golden Gate in the previous year. While domestic clearances dominated, an increasing number of foreign flags entered the Bay: in the first nine months of 1849, only 36 vessels cleared foreign ports for San Francisco; in the same period in 1850, that number had risen to 165, with most—93—coming from Great Britain. Other Argonauts came from points as far away as Australia, Chile, China, and France, ushering in a new wave of global economics in California.

The number of vessels calling at San Francisco rose from trickle to deluge. From 64 in April 1849 to 240 in August and September, the port saw 775 vessels call that year, and on one February day in 1850, more than two dozen vessels called (one Sacramento

38 *New York Tribune*, December 3, 1851.

39 Walter Colton, *The Land of Gold, or, Three Years in California, 1846–1849* (New York: A. S. Barnes and Company, 1850), 54.

40 Among these was the steamship *Falcon*.

correspondent placed the number of arrivals at San Francisco for the twenty-month period ending October 1, 1850, at an astounding 1,031). An 1850 report listed San Francisco fifth in tonnage for vessel arrivals and ninth for vessel departures, attesting both to the meteoric growth of the port and its newly expanded role in global commerce; by 1851, it was the fourth-largest port in the United States with respect to the value of its foreign trade.⁴¹ By 1861, San Francisco ranked sixth among all US ports in total freight handled, and within a half decade the port boasted of handling nearly a half-million tons of cargo.⁴²

By October, a forest of masts arose from the waters of San Francisco Bay, as crews joined passengers in pursuit of a quick fortune. As early as June 1849, more than 200 salt-caked and weed-befouled vessels lay abandoned in the graveyard of ships that transformed the mudflats off San Francisco; by June of 1850—a month that saw 85 vessels arrive in the port—that number had more than doubled.⁴³ When his ship reached the bay in 1849, Henry Hiram Ellis of Maine recalled, “the harbor was full of abandoned vessels . . . master and crews had gone to the mines.”⁴⁴ Edward Lucett, a merchant-author who arrived in October 1849, noted “not a vessel in San Francisco possesses its full complement of men. . . . Mine all quitted as soon as it suited their convenience, and we were compelled to hire others at \$5 per day.”⁴⁵ By the following July, 526 ships sat idle in San Francisco Bay. Most never sailed again, stripped of their rigging and serving as warehouses, storeships, and churches (anchored off the Sacramento Street wharf, the ship *Panama* served as the Bethel Methodist Episcopal chapel. Founded by the Reverend William Taylor, it was later towed to dry land on Mission Street between First and Second Streets). Others were transformed to offices, saloons, hotels, and in one case, that of the packet *C. R. Daly*, a floating brothel with accommodations for fifty prostitutes and their customers.⁴⁶ Not all such edifices were dedicated to salacious ends: the brig *Euphemia*, was transformed to a city jail.⁴⁷ At 90 feet and 137 tons, *Euphemia* was purchased for \$3,000 from local politico William Heath Davis. Anchored near the Central Wharf (the current intersection of Battery and Sacramento Streets, near the Federal Reserve) it was supposed to relieve overcrowding in the extant city jails, but proved scarcely better. A contemporary report noted that shortly after its opening “the brig is literally filled with prisoners. If any more were incarcerated, it would rival the infamous

41 Report on Commerce and Navigation, 1850. For the year ending April 1, 1851, 1,250 vessels, carrying 550,000 tons of cargo called at San Francisco; three years earlier, the figures had been 84 and 50,000.

42 Robert W. Cherny and William Issel, *San Francisco: Presidio, Port, and Pacific Metropolis* (San Francisco: Boyd and Fraser, 1981), 11.

43 By November, there were 452 vessels (242 of which were American) and an additional 148 storeships along the San Francisco waterfront. Dozens of other storeships could be found moored at smaller landings such as Benicia, Stockton, and Sacramento. *San Francisco Daily Alta California*, November 1, 1851.

44 Henry Hiram Ellis, *From the Kennebec to California: Reminiscences of a California Pioneer*, ed. Laurence R. Cook (Los Angeles: W. F. Lewis, 1959), 13.

45 Edward Lucett, *Rovings in the Pacific, from 1837 to 1849; with a Glance ay California (By a Merchant Long Resident in Tahiti)*, 2 vols. (London: Longman, Brown, Green, and Longmans, 1851), 2:352.

46 Rod E. Redman, “The Barbary Coast: San Francisco’s Bawdy Paradise,” *Sea Classics* (December 2004): 37–42.

47 The same vessel would later serve as “a receptacle for the insane” (James P. Delgado, “Gold Rush Jail: The Prison Ship *Euphemia*,” *California History* 60, no. 2 [Summer 1991]: 134–41, quotation on 136). See also “Gold Rush Ships in Levi’s Plaza” Historical Archaeological Investigation, 1980, which revealed nine ships near Pier 19, in the triangle between the Embarcadero, Battery, and Vallejo Streets. To date, archaeologists have identified the exact of proximate location of the remains of forty-two vessels that can be traced to the gold-rush period. For a comprehensive treatment of gold-rush era craft moored in San Francisco harbor, see Albert Harmon, Harlan Soeten, and Karl Kortum, *Notes on the Gold Rush Ships* (San Francisco: San Francisco Maritime Museum, 1963).

black hole of Calcutta.”⁴⁸ A second vessel, *Waban*, was operated by the State of California in the adjacent waters, eventually being beached at Black Point Cove. A contemporary observer described the startling scene:

It looks very curious in passing along some of the streets bordering on the water to see the stern of a ship with her name and the place from which she hails painted upon it, and her stern posts staring directly at you on the street. These ships, now high and dry, were hauled in about a year as storeships, before the building was carried on in that section of the city in so rapid a manner, and now find themselves out of their natural element and a part of the streets of a great city.⁴⁹

While most newcomers headed straight for the Sierra Nevadas, enough stayed to transform San Francisco into an instant city. A Bostonian who sailed through the Golden Gate aboard *Velasco* in September 1849 noted, “The ships in the harbor look like a cedar swamp . . . more arrive every day; I went up the masthead and tried to count them but they were so thick I found it impossible.”⁵⁰ William Heath Davis described the waterfront as “composed of eight to nine hundred vessels, anchored between Clark’s Point and the Rincon, presenting a very striking picture, like an immense forest stripped of its foliage.”⁵¹

With increased vessel arrivals came a corresponding spike in population: from 2,000 in February 1849, to 3,000 in March, 5,000 in July, 12,000 in October, and nearly 40,000 by spring 1850. San Francisco moved from port to city, becoming the largest city west of St. Louis. Likewise, the population of California mushroomed from 15,000 in 1847 to nearly 100,000 (92,497) in 1850 and more than quadrupled again (379,994) by the eve of the Civil War. The city developed to serve the port: warehouses, fuel facilities, industries, businessmen, and laborers were all needed to feed the insatiable demands of a port grown to prodigious dimensions. It was clear that city fathers and municipal officials would have to somehow meet the needs of these newcomers.

To meet these various demands, city fathers undertook a variety of steps. To create enough space for the ships and their passengers, and to generate revenue for the city, they decided to survey and sell water and beach lots, “at public auction and to the highest

48 *San Francisco Daily Alta California*, August 4, 1850.

49 *San Francisco Daily Alta California*, April 12, 1851. *The San Francisco Prices Current and Shipping List* listed 164 storeships by July 7, 1852.

50 Thomas Reid, “Diary of a Voyage to California in the Bark *Velasco*,” October 9, 1849, Bancroft Library, University of California, Berkeley.

51 Quoted in James P. Delgado, *Gold Rush Port: The Maritime Archaeology of San Francisco* (Berkeley: University of California Press, 2009), 138. Excellent work done on the extensive maritime archaeology of San Francisco includes Allen G. Pastron and Eugene M. Hattori, eds., *The Hoff Store Site and Gold Rush Merchandise from San Francisco, California* (Ann Arbor: Society for Historical Archaeology, 1990); William Self Associates, *Down She Went: A Report on the Excavation and Analysis of the Gold Rush-Era Ship Rome, San Francisco, California*, submitted to the Department of Planning, City and County of San Francisco (Orinda, CA: William Self Associates, 1986); Allen G. Pastron, Jack Prichett, and Marilyn Zeibarth, eds., *Behind the Seawall: Historical Archaeology along the San Francisco Waterfront*, 4 Vols. (San Francisco: San Francisco Clean Water Program, 1981); and James P. Delgado, Rhonda K. Robichaud, and Allen G. Pastron, “*This Fine and Commodious Vessel*”: *Archaeological Investigation of the Gold Rush Storeship General Harrison* (Oakland: Archeo-Tec, 2007).

bidder . . . for the benefit of the town of San Francisco.”⁵² On March 16, Edwin Bryant, alcalde of San Francisco, published a notice that water lots in Yerba Buena cove, including 35 blocks now occupied for business between Broadway and Folsom Streets, would be sold at auction to the highest bidder on June 29. Divided into 444 lots (measuring 137 ½ feet by 46 feet), the program was successful (an additional 328 lots laid out in 1850) but controversial.⁵³ An additional 137,000 acres of tidelands—the lands between high- and low-water lines—would be sold for \$1 an acre beginning in 1855. In all cases, winning bidders scuttled ships and used parts of Telegraph and Russian Hills to fill in their lots, much to the chagrin of neighboring business owners who now saw their own wharves become unusable. The “steam paddy,” a prototypical steam shovel, assisted in this process. Pile drivers operated day and night, as piers and bulkheads reached out to enclose the water lots. Waterfront relations were extremely volatile during this time. Fred Lawson later revealed to reporters how he operated his business in a scene that approached open warfare. Describing how he scuttled both *Elizabeth* and *Rome* (amid bouts of gunfire) to serve as substrate, he then turned to his handling of *Noble*.

When I sunk her, the Pacific Wharf Company objected so strongly that we made a sort of compromise, and I brought in the *Hardie* to help extricate the *Noble*. . . . The company furnished the men for the work and besides their pay they received all the free drinks they wanted. . . . The first day the tide was too low to move her, and on the second day a storm came up and some way, the little *Hardie* had to sink . . . and that settled my title to the property.⁵⁴

The process, while environmentally destructive, was ingenious. Wharves extended out from shallow mudflats to deeper parts of the bay, reaching ships that no longer had to be accessed by lightering. No longer hemmed in by the surrounding sandhills, the city’s graded landscape was perfect for building warehouses and other necessary buildings. At once, developers created valuable real estate and a deepwater port. In all, some 21 million cubic yards of fill were added to the bay; an even greater quantity would make its way into the water after the introduction of hydraulic mining operations in the Sierras.⁵⁵ At the same time that these hulk undertakers were going about their business, a large number of ships were dismantled by ship-breakers such as Charles Hare, whose yard (located near today’s Spear Street) employed dozens of Chinese laborers, and which was part of a fascinating

52 Gerald R. Dow, “Bay Fill of San Francisco: A History of Change” (master’s thesis, San Francisco State University, 1973). For a comprehensive look at the process in other municipalities, see Nancy S. Seasholes, *Gaining Ground: A History of Landmaking in Boston* (Cambridge, MA: MIT Press, 2003).

53 In 1851, Congress transferred ownership of all “swamplands and tidelands” to the states. The San Francisco-controlled state legislature subsequently transferred these to the city—with title to revert to the State of California in one hundred years—to sell to pay civic debts.

54 *San Francisco Examiner*, August 3, 1890.

55 By one estimate, 1.5 billion cubic yards was added to San Francisco Bay via hydraulic mining. An additional 8 million pounds of mercury were added to this toxic slurry. At some points, such as the Sacramento River, channel depths were decreased by as much as 13 feet, and across the Bay, depths were changed by an average of 3 feet. Robert Kelley, *Gold vs. Grain: The Hydraulic Mining Controversy in California’s Sacramento Valley* (Glendale, CA: Arthur H. Clark, 1959).

industry that recycled some 200 ships.⁵⁶

In summer 1849, after several false starts, entrepreneurs built the first wharf bridging the shallows of the cove (Yerba Buena cove was still a stagnant pond of thick, foul mud at low tide, with a variable depth of between 6 and 18 feet). This wharf enhanced the value of the remainder of the block, as the Central Wharf Stock Company, formed in April 1849, raised over \$100,000 in a matter of days. By the first week of May, the company advertised for proposals to build the 36-foot-wide, 700-foot-long wharf. By August 31, the *Alta California* reported that “piles for its support have been driven for a distance of over three hundred feet, and about half that distance is already completed and planked.”⁵⁷ Three weeks later, that same organ reported that “work has so far progressed as to admit small vessels and scows coming alongside.”⁵⁸ A shortage of warehouses led to a frenzied pace of construction as local water-lot owners scrambled to build structures capable of protecting the millions of dollars of cargo landing daily on the beaches, stacked along the piers. One awestruck observer reported:

I was lost in wonder and astonishment at the unparalleled rapidity of the rising of a city . . . nearly one half the city was built on extensive wharfs, and still the sounding and falling weight of piledrivers, axe, hammer, and saw was heard everywhere employed by speculators in water lots. Immediately after the completion of a few yards of wharf, a frame house was built upon it, shaking and trembling in its foundations the piles, at the passing of a vehicle or horse; and was immediately occupied by provision and clothing dealers, and liquor vendors and gamblers. All the commercial business was conducted on the wharfs.⁵⁹

By December 1850, more than a million dollars was spent to build nine wharves ranging from 250 to 975 feet (total wharfage equaled 6,000 feet). The extensions included Long Wharf (2,000 feet); Market Street Wharf (600 feet); California Street Wharf (400 feet) and Cunningham’s Wharf (375 feet, with a 330-by-30-foot T extension at its end), which added 2 miles of pedestrian boardwalk to the waterfront. “The wharves and docks are such immense structures that one can hardly find words to describe their extent and importance,” remarked Prussian-born Frank Lecouvreur upon seeing the waterfront in the 1850s.⁶⁰ Another European visitor, Etienne Derbic, commented, “the city’s developments have been extensive . . . the city has expanded over the water in regular sections, and one day San Francisco, like Venice, will see its streets plowed by innumerable boats, and ships of all

56 James P. Delgado, “What Becomes of the Old Ships?: Dismantling the Gold Rush Fleet of San Francisco,” *Pacific Historian* 25, no. 4 (Winter 1981): 1–9. See also Allen G. Pastron and James P. Delgado, “Archaeological Investigations at a Mid-19th Century Shipbreaking Yard, San Francisco, California,” *Historical Archaeology* 25, no. 2 (1991): 61–77; and William Self Associates, *Final Archaeological Resources Report, 300 Spear Street Project, San Francisco, California*, submitted to the Department of Planning, City and County of San Francisco (Orinda, CA: William Self Associates, 2006).

57 *Daily Alta California*, August 31, 1849.

58 *Daily Alta California*, September 20, 1849.

59 Cited in Edward Morphy, *The Port of San Francisco* (Sacramento: Board of State Harbor Commissioners, 1878), 9.

60 Frank Lecouvreur, *From East Prussia to the Golden Gate*, ed. Josephine Rosana Lecouvreur, trans. Julius C. Behnke (Los Angeles: Angelina Book Concern, 1906), 178.

sizes will be able to unload their cargoes at its sides.”⁶¹ The 50 miles of San Francisco’s natural coastline were thereby extended by some 15 miles, with long finger piers stretching from the shallow mudflats of Yerba Buena cove out to the deeper, but less well-protected anchorages in the ship channel. Initially, wharf construction was left to private groups that could raise money more easily than local municipalities; among the most notable accomplishments of this period was Meiggs Wharf, completed in 1853. Extending nearly 1,600 feet into the bay from its origin at the foot of Mason Street in North Beach, it stood as a testament to its creator, Harry Meiggs, a scoundrel who absconded with a good deal of the public treasury (and city records) in 1854.⁶² Local newsmen reported on the process:

The splendid wharf, partially constructed at heavy expense by the city, has fallen into the hands of a number of gentlemen, who have formed themselves into a stock company, with the determination of extending the wharf some eight hundred feet further out. The stock was all taken up previous to the organization or first meeting of the company, and the full amount of capital subscribed. The contract for extending it has been completed and the first series of piles already driven. In forty days the famed Central Street Wharf, will have a competitor equal, if not superior, in every respect.⁶³

Said another, “The extension of Battery Street is progressing surely as lots are being filled in in every direction.”⁶⁴ The *Alta California* was amazed at the speed and efficiency of the project: “as the wharves run out, the steam paddy empties the sand in between them, and where vessels floated a few months since, merchandise is being dragged by drays and stately structures stand.”⁶⁵

Captain Fred Klebingat, who sailed out of the port in the early years of the twentieth century, related a scene not much changed from a half century earlier:

“the fill between the wharves was just like any dump . . . they dumped rubbish from buildings, pulverized bricks and old concrete, horse manure and dead cats, waterlogged hay bales and cement sacks . . . anything that was heavy, useless, and cheap.”⁶⁶ Innovative lot owners hired ship captains to scuttle their craft in narrow slips between wharves. The *Evening Picayune* was amazed at the prospect:

At some future period when the site of San Francisco may be explored by a generation ignorant of its history, it will take its place by the side of Herculaneum and Pompeii, and furnish many valuable relics to perplex the prying Antiquarian. Buried in the streets, from six to ten feet beneath the

61 Michael Corbett, *Port City: The History and Transformation of the Port of San Francisco, 1848–2010* (San Francisco: San Francisco Architectural Heritage Press, 2011).

62 Born in upstate New York in 1811, Meiggs arrived in San Francisco aboard the *Albany* on January 11, 1849. Selling the cargo of lumber he brought with him, he made a fortune that allowed him to acquire a controlling interest in Mendocino’s California Lumber Manufacturing Company. Involved in local political scandals, he fled the scene on October 6, 1854, aboard the brig *American*. Meiggs later became a public utilities and railroad tycoon in Peru. *New York Times*, January 31, 1855.

63 *San Francisco Daily Alta California*, April 8, 1851.

64 *San Francisco Evening Picayune*, June 16, 1851.

65 *San Francisco Daily Alta California*, October 7, 1851.

66 Cited in Olmsted, *San Francisco Waterfront*, 126.

surface, there is already a stratum of artificial productions which the entombed cities of Italy cannot exhibit. Knives, forks, spoons, chisels, files and hardware of every description, gathered from the places of several conflagrations. Masses of nails exhibiting volcanic indications, stove plates and tinware, empty bottles by the cart-load and hundreds of other miscellanies, lie quietly and deeply interred in Sacramento Street, and perhaps will be carefully exhumed in days to come, and be distributed over the world as precious relics.⁶⁷

Often the work was of poor quality. "I was astonished," reported one observer, "Some of the wharves were broken down, others were in a fair way to share the same fate, being veritable man-traps by missing and broken planks, through which, nightly, men were precipitated and engulfed by the muddy waters beneath. . . . Many of the houses erected on the wharves were tottering on their insecure foundations of piles half-demolished."⁶⁸ The city's attempt to respond to "the irregular and predatory manner in which the waterfront was being extended by capricious enterprise" was ineffectual.⁶⁹

In response to such scandals, the 1863 California state legislature passed a bill establishing the Board of State Harbor Commissioners to "provide for the improvement and protection of the wharves, docks, and waterfront." Between its creation and the mid-twentieth century, the body spent over \$120,000,000 to build, repair, and regulate port facilities (including the construction of a 6-mile-long stone seawall along the established waterfront), raising the funds from port charges and the sale of bonds.⁷⁰ These fees included wharfage duties (charged for the passage of goods or passengers), dockage (paid for the berthing of vessels), and demurrage (paid on cargo or vehicles that remained on the dock for a longer time than was allowable). Despite these conveniences, lighters and boatmen were still employed in some places, ferrying passengers and goods to vessels moored off the waterfront, a strategy utilized by astute sea captains wary of losing their crews to the goldfields.

Eventually the disastrous hydraulic mining methods had to be dealt with. In 1876, T. J. Arnold, Engineer of the State Board of Harbor Commissioners, issued the alarming statement, that should the same rate of stream clogging continue, Suisun Bay would be almost completely choked within fifteen years and San Pablo Bay within thirty.⁷¹ It was a veritable

67 *San Francisco Evening Picayune*, September 30, 1850.

68 W. V. Stafford, "The State Wharves of San Francisco: A Lucrative Public Property," *Overland Monthly* 56, no. 4 (October 1910): 341–52. See also Gerald Nash, "Government Enterprise in the West: The San Francisco Harbor, 1863–1963," in *The American West: A Reorientation* (Laramie: University of Wyoming Press, 1966).

69 Cited in Corbett, *Port City*, 80.

70 The preeminent work on the early history of the Board of State Harbor Commissioners remains Lamberta Margarete Voget, "The Waterfront of San Francisco, 1863–1930: A History of its Administration by the State of California" (PhD diss., University of California at Berkeley, 1943). See also J. H. McCallum, "The Port of San Francisco: A History of the Development of Commerce and an Analysis of the Growth of Port Facilities on San Francisco's Waterfront," *Pacific Marine Review* 20, no. 3 (March 1923): 131–34. By the mid-twentieth century, San Francisco had a waterfront 12.4 miles long, with 18 miles of ship berthing space along 42 piers and two deepwater channels (China Basin and Islais Creek).

71 T. J. Arnold, *Report to the Board of State Harbor Commissioners* (San Francisco: Joseph Winterburn and Company, 1876). Before mining debris shoaled the rivers, ships drawing as much as ten feet could sail directly to Sacramento and Stockton, where many were recycled as improvised wharves and buildings in the style of San Francisco's waterfront. By the late 1850s, the navigation of deep-draft vessels was impossible, and soon the passage of smaller vessels was seriously curbed. Robert Kelley, *Battling the Inland Sea: American Political Culture, Public Policy, and the Sacramento Valley, 1850–1986* (Berkeley: University of California Press, 1989).

tourniquet shutting off a life-giving artery. While the ecological and environmental impact was severe, even worse was the fact that the bay fill was subject to shifting and liquefaction in succeeding seismic activity; much of the damage caused to San Francisco property in 1906 and 1989 occurring in these very regions. Describing the haphazard fashion in which the city was “made,” Chilean commentator Benjamin Vicuña Mackenna opined, “San Francisco is like a Venice made of pine instead of marble—a city of ships and piers, teeming with wharves and ruled by tides. The whole central part of the city swayed noticeably because it was built on piles the size of ships’ masts driven down into the mud.”⁷²

As the shoreline advanced, the wharves pushed into deeper water. Much of the wharf construction came with an obvious ecological impact. By 1860, lumberjacks felled Oakland’s 5-square-mile redwood forest, including some trees that topped 300 feet and by 1872 lumbering activities throughout the state had denuded one-third of California’s forests. Two of the tallest Sequoias sacrificed once guided captains toward the Golden Gate from 16 miles offshore.⁷³ The loss of these landmarks required a policy response. To improve navigation within the Bay, Alcatraz was outfitted with a lighthouse. Opened on June 1, 1854, it represented the first such structure on the Pacific Coast, soon joined by those at Fort Point (1854) and Point Bonita (1855). Lights, though, only work when they are visible. Fog remained the greatest hazard along the California coast: to assist mariners during times of low visibility, a fog signal (first consisting of an old cannon that was fired at regular intervals and later changed to a bell) became operational at Point Bonita from August 8, 1855.⁷⁴

In 1850, the first California state legislature founded the Bar Pilots Commission to provide safe access—at regularly established fees—to the treacherous and narrow harbor entrance.⁷⁵ A modern communications station, with the first application of an electric telegraph in the western United States, opened on September 22, 1853. This sophisticated system, replacing the antiquated semaphore station above the city’s eponymous Telegraph Hill, identified and relayed information about approaching vessels.⁷⁶

In 1850, a Merchants Exchange, along with a burgeoning system of marine insurance, brought order to the chaotic San Francisco waterfront, and a booming ship chandlery business reflected the growing importance of the port. Established to collect, analyze, and disseminate ship-traffic information, the Merchants Exchange sought to bring order to a

72 Benjamin Vicuña Mackenna, “Paginas de mi diariodurantetresanos de viaje, 1853-1854-1855,” in *Obras Completas de Vicuña Mackenna*, 2 vols. (Santiago: Universidad de Chile, 1936), 1:26. Among those identified were the *Panama*, which, after serving for a time as a “lodging house and drinking ship,” was converted into a seamen’s bethel, and another (the *Thomas Bennett*) that was “headquarters for the young blades from Baltimore” (Roger and Nancy Olmsted, *Gold Rush Ships in Levi’s Plaza* [San Francisco: Historical Archaeological Investigation, 1980]). The report quoted an earlier correspondent who asked: “How many now living can now remember the pie, doughnuts, and coffee at the stand of the old *Apollo* on Battery Street . . . the stand was made by cutting into the *Apollo* hull, just under the cabin windows, and many a man who stepped ashore from his long, weary voyage, took his first meal in California at this place” (“Reminiscences: The Last of the Storeships,” *Daily Alta California*, May 22, 29, and June 5, 1882).

73 Carrie Casey, “Oakland’s Redwood Retreat,” *American Forests* 97 (November–December 1991): 55–57.

74 Ralph Shanks, “Responding to Shipwrecks: The U.S. Lighthouse and U.S. Lifesaving Service,” *Sea Letter* 64 (2003): 6–10.

75 Stephen J. Canright, “Pilot Schooners: Navigating the Treacherous Coast and Bay,” *Sea Letter* 64 (2003): 16–17. See also Stephen J. Canright, “By Contrast: Pilots under Sail in San Francisco Bay,” *Mains’l Haul: A Journal of Pacific Maritime History* 34, nos. 2–3 (1998): 7–25.

76 The firm of Sweeny & Baugh had built the semaphore station atop the 300-foot hill in 1849 and operated it until the telegraph stations made it obsolete. Frank Soule, John Gisbon, and James Nisbet, *The Annals of San Francisco* (San Francisco: Kessenger Press, 1855), 465.

chaotic system of conflicting reports, unregulated activity, and cutthroat competition.⁷⁷ Others were less interested in these concerns. In pursuit of business, Whitehall boatmen—such as Dave “Hook On” Crowley—would meet deepwater ships as soon as they entered the Bay, offering ship chandlery services, rooms to let, repair facilities, and other amenities.⁷⁸ It was not unusual for two-man Whitehall crews to wait all night beyond the Golden Gate, one man bailing while the other rowed, in pursuit of new customers. Merchant James Garniss reported on the frenzied scene of nautical commerce: “We had our boats, and men on the lookout for us, and when a vessel came in, there was quite a rush of boats to board her, and the merchant who got to the vessel first was generally the luckiest fellow. . . . There were no regular prices, and we made what we could.”⁷⁹ Charles Ross, a trader from New Jersey, recounted that in 1849, “merchants would board vessels at the Heads (on either side of the Golden Gate) and offer in some cases a hundred percent advance, without looking at the invoice, for the entire cargo, no matter what it consisted of.”⁸⁰ Now, rather than having rival merchants racing out to the Golden Gate to claim the business of merchant ships entering the harbor, an orderly process of commissioned auctions held at the Merchants Exchange relieved the stress on overburdened wharfingers. Stevedores and longshoremen were organized to off-load cargo along the bustling embarcadero, storing them in newly constructed warehouse facilities that were, admittedly, little better than holding pens for the speculative cargo they contained, but much more convenient than the previously employed storeships. Shipping agents, meanwhile, operated on the fringes of the labor market, and provided replacement crews to captains whose own charges had fled for the goldfields.⁸¹ By 1851, a dry dock and marine railway was completed at the foot of Second Street. A US Marine Hospital, built in 1853 at the end of Rincon Point, provided medical relief for destitute sailors (funded by a payroll tax on mariners and by revenue income, it relieved the citizens of San Francisco from having to supplement the maintenance and care of debilitated sailors). By 1877, it had relocated to the Presidio, with the former structure becoming a Sailor’s Home. In 1891, a quarantine station opened on Angel Island, further isolating the residents of San Francisco from diseases carried by maritime workers.⁸²

It was clear then, that the gold rush was a major maritime event, both for San Francisco and for the nation. It served to rejuvenate a moribund American merchant fleet, employing tens of thousands of carpenters, naval architects, officers, and seamen who were suddenly in high demand. It led to the development of new naval technologies and gave rise to the science

77 Established in 1849, the Merchants Exchange featured a network of buildings, each of which featured a rooftop belvedere used to communicate with incoming ships via semaphore and telegraph.

78 Dave was stepfather to young Thomas Crowley, who would go on to found the tug company. The teen-aged Crowley began his career in 1890 with an 18-foot Whitehall boat. By the turn of the century, he had acquired a gasoline-powered launch that gave him a decided advantage over his competitors. Jerry McMullen, “The Ubiquitous Whitehall Boatmen,” *Mains’l Haul: A Journal of Pacific Maritime History* 10 (1974): 4–7.

79 James R. Garniss, “The Early Days of San Francisco—Reminiscences for the Bancroft Library, 1877,” 10–11, Bancroft Library, University of California, Berkeley.

80 Charles L. Ross, “Experiences of a Pioneer of 1847 in California,” 14, Bancroft Library, University of California, Berkeley.

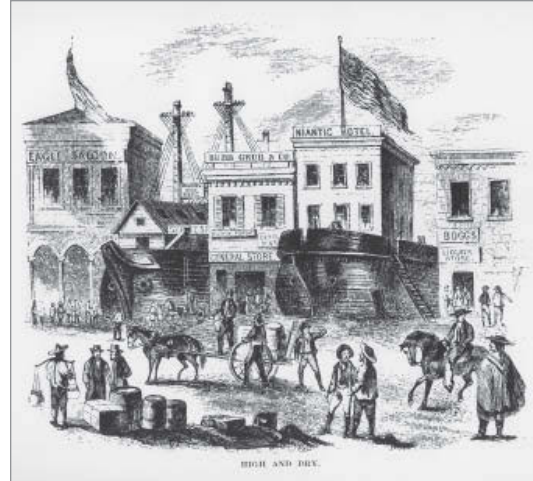
81 For good first-person accounts of these activities, see Bill Pickelhaupt, *Shanghaied in San Francisco* (San Francisco: Flyblister Press, 1996).

82 The insular location was chosen for its advantages as a quarantine station. Those diagnosed with noncontagious diseases were often housed aboard the old sloop of war *Omaha*.

of oceanography, and led to a graveyard of ships whose presence still speaks to the maritime dimensions of San Francisco's past and to the ecological and environmental impact of that time. It inaugurated new trade routes that stretched from the Atlantic to the Pacific and that led to international migration the likes of which had rarely been seen as immigrants came from Asia, South America, Europe, and all points in between. The gold rush invigorated cities like Valparaiso and Callao as much as it did San Francisco, and generated considerable interest in Central America, where visionaries began to look for ways to broach the isthmus with a canal that would link two of the world's greatest bodies of water. It entrenched California, in general, and San Francisco, in particular, in the American consciousness as a place where anything was possible and where fortunes awaited the industrious, the bold, and the intrepid. The gold rush was, in effect, a revolutionary event.

Within a half decade of the initial onslaught, California and San Francisco became hotbeds of maritime activity, boasting numerous maritime industries, a naval base, government offices, and assorted accoutrements allowing even the most derelict sailor to feel at home. While tempting to suggest that the end of the gold rush era also brought an end to the increased pace of maritime activity in San Francisco, this is not the case. Indeed, as the following chapters will show, the period from 1855 to 1920 saw incredible maritime activity, including fishing and whaling, coastal commerce and deepwater sailing, and transformations in the way San Franciscans worked, played, and interacted with the waters of the Bay and beyond.

The Niantic Hotel, as depicted by a contemporary sketch artist, Niantic was the most memorable of beached gold rush ships, but by no means the only one. Her remains were located beneath the TransAmerica pyramid in the late 1970s.



Courtesy San Francisco Maritime National Historical Park. A12.29237.

William A. Leidesdorff was among the most notable residents of early San Francisco. He owned the first steamer on the Bay and held several elected and appointed offices. This West Indian immigrant was an anomaly for his time, and is all but forgotten by modern historians.



Courtesy Robert Cowan Collection. Bancroft Library, University of California, Berkeley. BANC-PIC 1956.014.

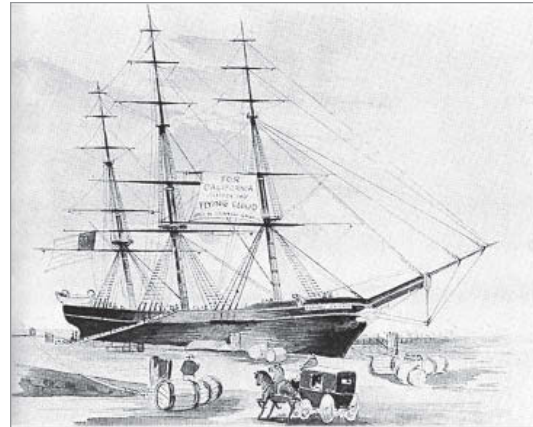
Apollo, a typical storeship of the gold rush period. Run aground and housed over, she served as a warehouse in the absence of traditional storage facilities.



Courtesy San Francisco Maritime National Historical Park. A12.15574

To attract customers during the gold rush, shipping lines placed an emphasis on speed. Clipper ships were in constant rivalry with each other, and eventually with various steamship lines. Colorful advertisements and price wars added flavor to the competition. The Pacific Mail Steamship Company was the most successful of all when bringing passengers to California.

Top: A contemporary illustration of the Boston-built Flying Cloud, advertising for departures to California, and loading at her New York wharf prior to departure for San Francisco.



From the California State Library, California History Section.

Center—This rarely seen 1850 Pacific Mail handbill advertised through service to San Francisco via the steamers California, Panama, and Oregon, the company's first vessels on the West Coast. Cabin passage from Panama to California was \$300, although rates fluctuated as competition spurred rate wars.

**THROUGH LINE FOR SAN FRANCISCO,
VIA CHAGRES.**

THE NEW AND FAVORITE STEAMSHIPS.

CHEROKEE	1300 tons	Captain H. Waddle
PHILADELPHIA	1100 tons	Captain J. Y. Nicholson

From the only direct line between New-York and Chagres, in connection with the United States Mail Steam-packets to the Pacific—a month's journey the through to San Francisco. They leave New-York the 1st of each month.

REDUCED RATES OF FARE TO CHAGRES.

After Below State Rooms,	100 00	Freight	100 00
Forward Passage do	100 00	Freight	100 00
Lower Cabin,	50 00		

All the above due at the same time, and have the privilege of the Palace.

Storage, (loaded with necessaries and board,) 40 00

Freight to Chagres, 40 00

Each passenger is allowed personal baggage free, to the extent of 100 lbs., not exceeding in measurement 10 cubic feet. Expenses on the Atlantic are borne by the passenger.

For freight or passage, apply to
HOWLAND & ASHENWALL, 54 South Street, N. Y.

Pacific Mail Steamship Company.

THE UNITED STATES MAIL STEAM PACKETS.

PANAMA	1067 tons	Captain David G. Bailey
OREGON	1099 tons	Captain Charles F. Patterson
CALIFORNIA	1050 tons	Captain Thos. A. Budd
TENNESSEE	1300 tons	Captain George A. Cole
CAROLINA	600 tons	
UNION	600 tons	

are intended to form a semi-monthly line between Panama and Ports in California.

Passengers in the After Cabin are furnished bedding, but not wine and liquors. Passengers in the Stowage are bound with each nation as are furnished in the case, and with medicines and pills. All passengers will be allowed for personal baggage free, to the extent of 100 lbs. weight, not exceeding in measurement 10 cubic feet. Freight for extra baggage or goods to ship, when taken, one and a half per cent. on all specie.

Passengers should not exceed 125 lbs. weight for main baggage.

Passage from Panama to San Blas or Mazatlan,	\$22 00	\$100 00
do do San Diego,	20 00	125 00
do do San Francisco,	30 00	150 00

No steamer to be loaded with to be taken as baggage. All personal baggage, including health fees and hotel bills, to be paid by the passenger. No passage received until paid for. Apply at the office of the Company.

New-York, 54 South Street.

From the collection of Stephen J. and Jeremy W. Potash. Copyright Stephen J. and Jeremy W. Potash (Steve@Potashco.com).

Bottom: Clipper cards were colorful eye catchers that enticed prospective customers to various shipping lines. They were among the first full-color advertisements in American history.

MERCHANTS' EXPRESS LINE OF CLIPPER SHIPS FOR SAN FRANCISCO.
Passages 106 & 117 Days.

THE WELL-KNOWN **EAGLE WING** EXTREME CLIPPER SHIP

LINDSAY, Commodore, is now loading at Pier 10 E. B.
RANDOLPH M. COOLEY, 88 Wall St., Tenth Building.
Agents in San Francisco, Messrs. DE WITT, KITTLE & CO.

Source: California Historical Society.

The process of making real estate by scuttling ships and using land carved from local hilltops was perfected in gold-rush San Francisco. This image shows water lots cordoned off and ready to be developed.



Courtesy San Francisco Maritime National Historical Park. J. Porter Shaw Library. A11.4528psl

The stern of Niantic, as preserved by the San Francisco Maritime National Historical Park. Among other artifacts associated with this historic vessel is a complete log of its journey to gold-rush San Francisco.



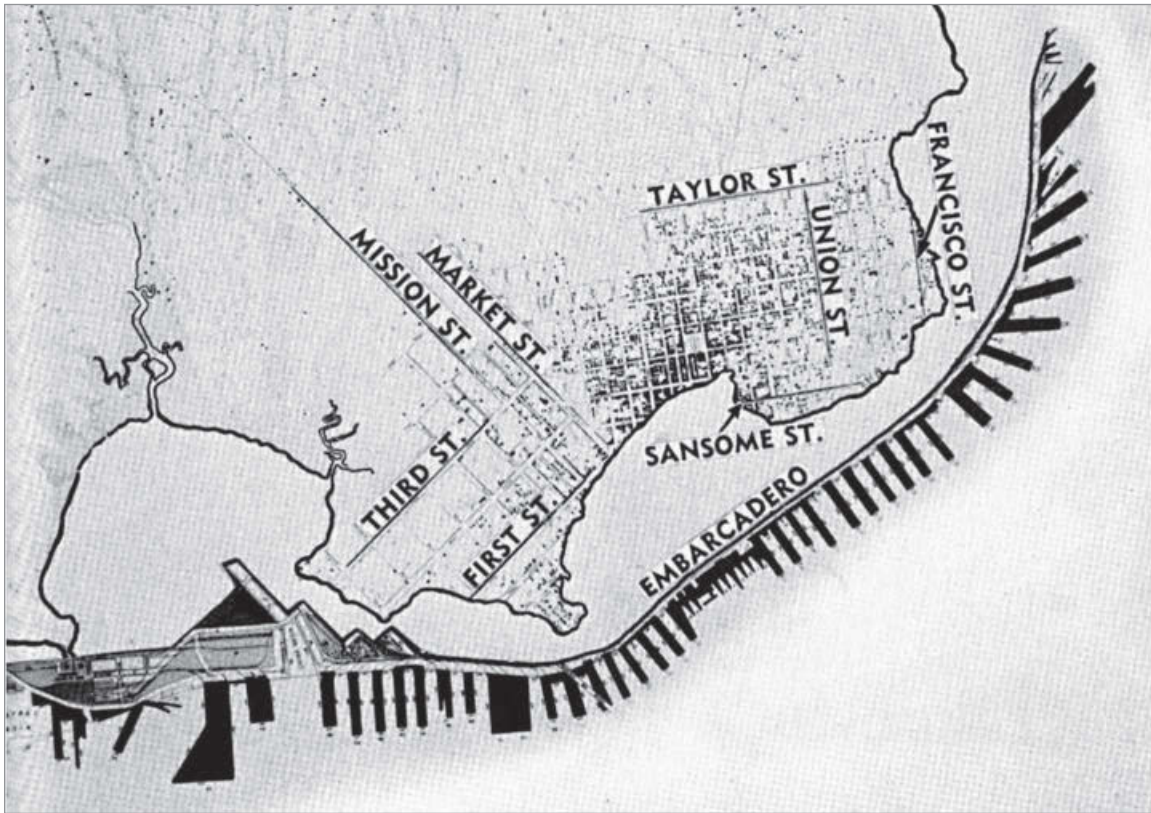
Photo courtesy of Paul Judge.

On the right, an image from the May 3, 1851, panorama of the city, showing the proverbial “forest of masts.”



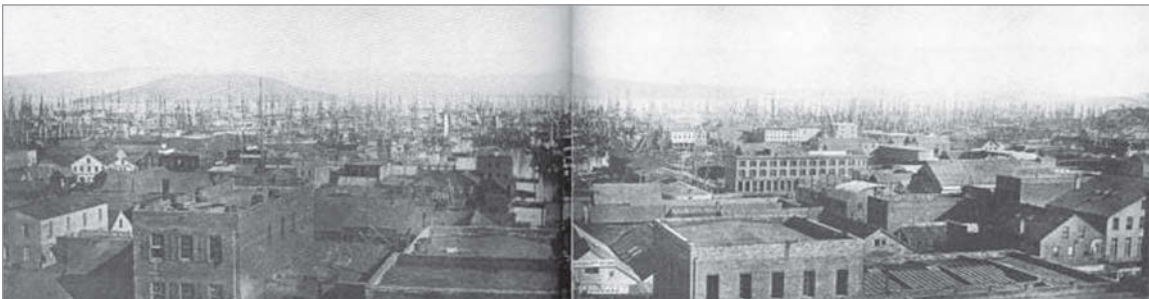
Courtesy San Francisco Maritime National Historical Park, A11.7881 nl.

A mid-twentieth-century survey map shows the extent of filling in just one century. The natural shoreline contrasts with the artificial curvature of the seawall.



Courtesy San Francisco Maritime National Historical Park. A11.15005n1, N.

No discussion of gold-rush San Francisco would be complete without a sample from this famous panorama created by William Shew depicting the “forest of masts” rising from the Bay.



Courtesy San Francisco Maritime National Historical Park. A11.35.815.

CHAPTER 6

POST-GOLD RUSH MARITIME ACTIVITIES

Following the whirlwind of seagoing activity accompanying the gold rush, several other notable trends marked California's maritime history. Indeed, for all the frenetic activity characterizing the rush to California, the most profitable and sustained period of maritime affairs could be found in the peripatetic sailings that brought lumber, agricultural products, and immigrants to and from California between the Civil War and the twentieth century. As one observer noted, "If one were to name the most vigorous period in the early maritime history of San Francisco Bay, it would undoubtedly be during the 1870s and 1880s—a period when trade was relatively unhampered by restrictions and when shipping through the Golden Gate flourished."¹ In 1880, with tonnage estimated at 3,350,000, the US census described San Francisco, with its 233,959 people, as "the commercial metropolis of the Pacific Coast."² The new residents, failed Argonauts, and intrepid entrepreneurs who streamed to the Golden State in the mid-nineteenth century required a plethora of supplies and necessities to make a better life for themselves along the Pacific coast. Until the completion of the transcontinental railroad in 1869, the quickest, safest, and surest way to bring bulk and/or heavy commodities and passengers to and from California was via maritime routes. Even after that date, seagoing commerce played a disproportional role in the economy and culture of the Golden State. This chapter focuses on the maritime dimensions of the period roughly ranging from 1860 to 1900, focusing especially on the lumber and grain trades, and on associated tasks (shipbuilding, warehousing) that arose to support and supply these. Argonauts and their descendants provided a natural market for many products, and this consumer base relied extensively on maritime connections.

Following the gold rush, among the first major industries to develop in the Pacific was lumber. Newcomers to California were in dire need of wood to provide housing, firewood, planks for sidewalks, to build and repair coastal and deepwater vessels, and for innumerable other purposes. Local stands of redwoods were quickly exhausted, causing residents to look farther afield for these resources.³ Thankfully, the heavily forested coasts of Northern California, Oregon, and Washington provided a seemingly endless supply of timber from which to fashion a wide variety of products, and lumber represented the first large-scale coastal cargo. The lumber industry, and the transportation of this cargo from its region of

1 California State Senate, *Final Report of the Senate Fact-Finding Committee on San Francisco Bay Ports* (Sacramento: California State Senate, 1951).

2 At that time, the city handled "99 per cent of all merchandise imported to and 83 per cent of all exports from three Pacific states, and 60 per cent of all manufactured goods in the region." US Board of Engineers for Rivers and Harbors and the US Shipping Board, *The Ports of San Francisco, Oakland, Berkeley, Richmond, Upper San Francisco Bay, Santa Cruz, and Monterey, California*, Port Series No. 12 (Washington, DC: GPO, 1933), 141.

3 For local lumbering, see Sherwood D. Burgess, "The Forgotten Redwoods of the East Bay," *California Historical Society Quarterly* 30 (March 1951): 1–14; and Frank M. Stanger, *Sawmills in the Redwoods: Logging on the San Francisco Peninsula, 1849–1967* (San Mateo, CA: San Mateo County Historical Association, 1967). In this early period, sloops and schooners loaded with dressed lumber and redwood shingles cut from the Coast Range threaded their way down to the lower bay port of Redwood City and from there to the lumberyards of San Francisco. In later years, Redwood City would become the prime cement and gypsum port on the West Coast.

abundance to cities farther south, makes up an extensive and highly specialized commerce that forms the next area of our investigation.

As one historian has commented, “of all the sailing ship trades in the Pacific Coast pioneer days, transporting lumber from the north was without doubt the largest: the industry was far more profitable than the shipment of foodstuffs, household goods and industrial machinery from the East Coast around the Horn.”⁴ Even before the gold rush, redwood lumber sold for as much as \$500 per 1,000 board feet (the common lot size); to meet the insatiable demand that accompanied the rush to San Francisco, these prices rose to exorbitant levels. When the first California lumber mill (established by John Reed in 1836 in Marin County, near Richardson’s Bay) and imported Hawaiian hardwoods proved insufficient to meet growing demand, suppliers looked to the Pacific Northwest. With a coastal forest that ran 400 miles north–south and extended 30 miles inland in some places, the supply seemed inexhaustible.⁵ Few Americans had ventured into this region until after the Mexican American War, with only 300 living north of the Columbia River in 1849. Overnight, the region attracted both capital and labor. By 1852, the scattered lumbering settlements around Puget Sound grew large enough to attract the first small brigs and barks—remnants from the gold rush fleet—and within a half-dozen years the region provided San Francisco with 60 percent of its required lumber. By 1854, their activities supported a steamer, the precursor of the “mosquito fleet” that would dominate the waters of the region.⁶ Within two decades, fourteen mills lined the shores of Puget Sound alone.

With increased activity came increased population. Veritable armies of men worked in company towns up and down the coast, felling trees (a mature redwood averaged 300 feet in height and 20 feet in diameter), sawing them into lumber, and transporting them to the cities and towns of California. It is not hyperbole to suggest, then, that the entire early economy of the North American Pacific coast was built on extractive industries (first fur, then lumber, fish, and gold), the fruits of which were almost entirely transported by ship; thus both mill and ship owners amassed huge fortunes in the lumber trade. Likewise, it is no exaggeration to suggest that the lumber from this region was the substrate on which the great cities of California (San Francisco, Sacramento, San Diego, and Los Angeles) were constructed.⁷

While the supply of lumber might have seemed inexhaustible, it was by no means easily accessible. As seen in earlier chapters, the relative dearth of safe harbors and protected anchorages north of San Francisco presented serious obstacles to those who wished to get involved in lumbering operations. North of San Francisco Bay, only Humboldt and

4 Jevne Haugan, “Dog Holes and Wire Chutes: From Sailing to Steaming in the Lumber Trade,” *Maritime Life and Traditions* 29 (Winter 2005): 20–29, quotation on 21.

5 On the lumber trade, see Thomas Cox, *Mills and Markets: A History of the Pacific Coast Lumber Industry to 1900* (Seattle: University of Washington Press, 1974). See also Edward van Syckel, *They Tried to Cut It All* (Seattle: Pacific Search Press, 1981); Lynwood Carranco, *The Redwood Lumber Industry* (San Marino, CA: Golden West Publishers, 1982); and John T. Labbe, *Logging the Redwoods* (Caldwell, ID: Caxton Press, 1979).

6 Thomas R. Cox, “Single Decks and Flat Bottoms: Building the West Coast’s Lumber Fleet, 1850–1929,” *Journal of the West* 20 (July 1981): 65–74.

7 On the transport of lumber from the region, see Wallace Martin, *Sail and Steam on the Northern California Coast, 1850–1900* (San Francisco: National Maritime Museum, 1983). See also James A. Gibbs, *West Coast Windjammers* (Seattle: Superior Press, 1968); James A. Gibbs, *Pacific Square-riggers* (Seattle: Superior Press, 1969); Jack McNairn and Jerry McMullen, *Ships of the Redwood Coast* (Palo Alto, CA: Stanford University Press, 1945); and Joseph Williamson and Gordon Newell, *Pacific Lumber Ships* (Seattle: Superior Press, 1960).

Crescent City provide true ports of any appreciable size along the California coast; still, the 270-mile run from the City by the Bay to Humboldt was dotted with more than fifty active ports where the buzzing of sawmills and the hammering of nails attested to the pace of activity contained there.⁸ These “dog-hole ports”—so named because they barely provided ample room for a dog to turn around in—presented a challenge to ship captains and crew. Considerable seamanship was required to guide a two-masted schooner (these small, maneuverable vessels were the preferred and almost exclusive vessel used in the redwood lumber trade) into such restricted ports, which offered little shelter from the heavy seas and strong winds associated with the region, and where swells could rise and fall by as much as 25 feet.⁹ The schooner rig, moreover, was preferred since it allowed these craft to sail closer to the wind than square-rigged vessels, a vital factor when beating up and down an uncharted coast that completely lacked navigation aids. Moreover, at 80 to 100 feet in length, two-masted schooners required smaller crews than other craft, an important consideration when hauling bulk cargoes like lumber (or the apples and potatoes that sometimes filled out the manifest) that brought little return.

With no suitable anchorages and a total dearth of wharves, lumber vessels were required to anchor off the coast, coming alongside as closely as safety would allow. The crew would then move the boards, pilings, shingles, railroad ties, and assorted panels onto the craft in a time-consuming and laborious process. A pair of ingenious—though highly dangerous—maneuvers lessened the time that these craft would be at anchor (and hence, not making a profit). The first was a wooden slide or chute. Wood was sent hurtling down this apparatus from the sheer 100-foot cliffs that dominated the northern California coast, the descent controlled by an apron that slowed the projectile just before it reached the deck. In two days’ time, upward of 75,000 board feet of lumber could be stowed either in the cargo hold of the schooner or in prodigious loads towering high above the deck.¹⁰

A slightly less dangerous method of loading the cargo (though it could still result in decapitation or serious bodily injury) utilized overhead wire cables. Being more labor-intensive, this method was less popular with profit-driven managers and foremen, who routinely favored speed over safety. By the 1880s, as wire became more readily available, they became more plentiful. The reach of the high wire rig—being much greater than that of a chute—allowed a vessel to now lie much further off a cliff face. In this scenario, ships would lie at anchor beneath a cable, and slings of lumber were gravity fed to a point just above the deck where the crew again controlled their passage by an apron. Given the inherent danger in handling, loading, and sailing such a craft, it is no surprise that the infant maritime unions in this country trace their origins to the men of the so-called Scandinavian navy, who were heavily involved in this trade. Nor should it be surprising that Congress soon condemned the dangerous conditions. Reflecting on the trade, one representative declared: “when

8 By the end of the 1850s, 300 mills were in operation. By 1870, they were producing over 440 million board feet of lumber per annum. The early 1890s marked the high point of lumber production and movement via water, as 1.2 billion board feet was produced; Washington mills alone outproduced all others combined. See Owen Coy, *The Humboldt Bay Region, 1850–1875* (Los Angeles: California State Historical Association, 1929).

9 Karl Kortum and Roger Olmsted (“... it is a dangerous looking place”: Sailing Days on the Redwood Coast,” *California Historical Quarterly* 50 [March 1971]: 1–19) reported ten schooners lost on the evening of November 10, 1865, alone.

10 To insure vessel stability, the load was normally distributed in relatively equal quantities above deck and in the cargo holds.

we reflect upon the rotten character of most of the vessels employed in the lumber trade, our only astonishment is that the wrecks are so few. . . . Congress should act to rebuke the monstrous sin of sending human beings to sea in such coffins as most of the lumber ships are known to be. The scale has a sailor in one side and a dollar in the other and the dollar weighs the man down every time.”¹¹

While maritime laborers sought to protect their lives and livelihoods by a variety of means (addressed in a later chapter), shipowners and lumber-mill operators likewise sought to protect their investments and control their workforce. Entrepreneurs such as Harry Meiggs—a corrupt San Francisco politician who opened a lumber mill at Big River in 1852—and Asa Simpson constructed far-reaching business models that included lumber operations, shipyards, and company towns.¹² Originally, vessels from outside the region—most often small square-riggers transferred from the gold rush fleet—furnished nearly all the bottoms that were employed in the lumber trade. For the most part, these craft were designed for general commerce and only imperfectly suited the task of hauling lumber. Soon, this disparity was noticed and local shipyards—generally small and underfinanced operations based in San Francisco—produced two-masted schooners especially suited to the task. At yards from Rincon Point to Hunters Point, and from North Beach to Steamboat Point, craftsmen turned out beamy, single-decked craft with large hatches affording easy access to the holds. They could take on prodigious deckloads, frequently carrying as much aboveboard as below, making loading and unloading fast and cheap. This design proved well adapted for lumber coasters, and remained virtually unchanged for as long as the coasting trade employed wooden ships. Inevitably, locally available stands of trees were exhausted, and savvy lumber mill operators jumped into shipbuilding with a frenzy. Rather than shipping boatloads of lumber to San Francisco for conversion into schooners, lumber mills constructed these craft on-site, loading them with their cargo then hauling that cargo south. One contemporary noted the benefits of this arrangement, stating that “this harbor possesses every facility for the profitable prosecution of this important business [shipbuilding] . . . an abundance of the best of timber, and mills to cut as ordered. . . . Shipbuilding will be carried on extensively at this place.”¹³

11 See C. Ray Howd, *Industrial Relations in the West Coast Lumber Trade* (Washington DC: GPO, 1924).

12 Edwin Corman and Helen Gibbs, *Time, Tide, and Timber* (Palo Alto, CA: Stanford University Press) provides a comprehensive history of the Pope and Talbot Lumber Company and is illustrative of the industry in general. The firm had been established by brothers Charles and William Talbot, the latter having captained the ship *Oriental* to San Francisco in 1849. They expanded their operation first to Humboldt County (where they harvested local timber for use as pilings in San Francisco) before moving to Puget Sound, where they concentrated on Douglas fir for use as ships masts. There, they introduced total integration, maintaining a fleet of some sixteen packets to handle the 175,000 board feet of lumber they produced daily. See also Andrew Price, *Port Blakeley: The Community Captain Renton Built* (Seattle: Port Blakeley Books, 1989), for a look at the company towns and how they were run. For a good description of family operations, see Emily Wilson, *From Boats to Board Feet: The Wilson Family of the Pacific Coast* (Seattle: Wilson Bros. Family Foundation, 2007).

13 *Humboldt Times*, November 2, 1861.

C. A. Thayer

Among the best representative examples of a sailing lumber schooner is C. A. Thayer, currently the only sailing lumber schooner still afloat. Built at the Fairhaven, California, shipyard of Hans Bendixsen in 1895 and named for a partner in the San Francisco-based lumber firm of E. K. Wood, Thayer was a mainstay of the Pacific coast, serving in a variety of roles for over a half century.

At 219 feet, the three-masted Douglas-fir vessel was well suited for her designed trade. Broad and shallow, her crew could handle tremendous quantities of lumber. Nine men could load 575,000 board feet every voyage: half was stored belowdecks, with the remainder piled ten feet high above board. It was not uncommon for her crew to handle 80,000 board feet in any given day. She made countless trips from Grays Harbor to San Francisco in her first seventeen years, retiring from that trade in 1912. Damages sustained from a heavy gale and the encroaching steam engine combined to force Thayer from the lumber trade.

For the next thirteen years, Thayer made seasonal runs from San Francisco to Bristol Bay, Alaska, bringing men and supplies to support the salmon salting operations located there. During the First World War, demand for shipping pushed Thayer to Australia, where she exchanged redwood and fir for coal. (Even when she was an active lumber ship, she was consigned almost exclusively to the Pacific coast trade, as occasional runs to Mexico and Hawaii attest, though she did deliver lumber to both Hawaii and Fiji.) She supported the Aleutian codfishery from 1924 to 1950, returning to Poulsbo, Washington, with its catch each summer. For a brief spell during World War II, she was demasted and served as an ammunition barge. Returning to the codfishery after that conflict, she plugged along and in 1950, was the last large sailing vessel to make a commercial voyage from the West Coast.

Thayer was purchased by the California State Parks in 1957, when she joined the fledgling collection of ships that now make up the historic fleet berthed at Hyde Street Pier. Transferred to the National Park Service in 1978, Thayer was designated a National Historic Landmark in 1984. Prior to her extensive restoration (2003), Thayer hosted thousands of schoolchildren in overnight programs.

In 2003, Thayer was towed to dry-dock where she underwent a massive restoration. Upward of 90 percent of her timbers were replaced in a process that took three years. Using traditional techniques—some of which had not been employed in West Coast shipyards in many generations—preservationists returned the ship to her former condition. Today, Thayer is part of the fleet of historic vessels berthed at Hyde Street Pier.

Indeed, shipbuilding became something of a natural adjunct for the owners of northern Pacific lumber mills, constructing dozens of Douglas-fir schooners to carry their product to southern markets, ushering in an era of vertical economic integration that prefaced the integrated monopolies of the Gilded Age.¹⁴ Some of these lumbermen had no choice but to diversify their operations. Located on bar harbors and outposts of the coast, they had a hard time convincing charters to visit their dangerous anchorages and thus were forced to obtain their own tonnage or face financial failure. Independent sawmill operators large and small, then, churned out vessels well suited both to the trade and to the environment. Shoal-drafted craft that could navigate shallow water and dangerous river crossings and bars, with ample cargo space both above and below the single decks, were as ubiquitous along the coastline as the trees that once dominated the rapidly denuded forests. Centerboard schooners (typically three-masted) further assured a safe clearing of river bars and made these craft even more maneuverable.

A number of talented master builders came to the fore, meeting the challenges of building vessels to match the demands of the lumber trade. Among the most notable of these shipwrights was Hans Bendixsen, a Danish carpenter who honed his skills in Copenhagen, building 113 wooden lumber schooners in an impressive thirty-three-year career at Humboldt Bay.¹⁵ John Kruse, employed at Asa Simpson's yards on Coos Bay, the Hall Brothers and W. H. Bryant of Puget Sound, and Peter Matthews of Grays Harbor were equally productive. Matthew Turner, an Ohioan who began his shipbuilding ventures in San Francisco before relocating to the town of Benicia on the Carquinez Straits, was even more prolific: starting in 1870, he turned out a total of 228 sailing and steam lumber schooners. His productivity was matched by his contributions to naval architecture: "he discarded the old plan of the broadest beam at two-fifths the length from the bow, made his models long and sharp forward and full aft, thus giving the stern more of a rake than was usual, and brought the anchors, chains and weights further aft . . . producing a stiff, fast vessel that proved valuable in the squally waters of the Pacific Coast and that was widely imitated."¹⁶

To provide needed cargo capacity without sacrificing speed (and remaining mindful of the industry's shallow draft needs), builders stretched their vessels, turning out craft like the four-masted *Caroline* and the five-masted *Inca* (both Hall Brothers vessels). In 1879, Hiram Doncaster of Puget Sound produced *Olympus*, the longest single-decked vessel produced in the world.¹⁷ Simplifying the rig to reduce the necessary manpower produced a bald-headed (or steamboat) schooner rig; this eliminated virtually all sail carried high. The use of donkey engines to raise sail, handle cargo, and ground tackle further reduced crew sizes and increased potential profits. In short, builders of the West Coast's lumber carriers met the demands of a special trade and a forbidding coastline with ingenuity, successfully adapting

14 Most of the yards established during the nineteenth century were small. California, for example, listed 62 yards in operation in 1881; these consumed some 6.7 million board feet of lumber to produce 221 vessels of various dimensions. See Ellis Lucia, *Head Rig: The Story of the West Coast Lumber Industry* (Portland, OR: Overland West Press, 1965).

15 Hans Ditlev Bendixsen was born in Denmark and immigrated to San Francisco. By 1868, he had relocated to Humboldt, establishing a yard first at Eureka and then at Fairhaven.

16 The remains of Turner's yard survive in Benicia. The Benicia Historical Museum possesses the bow of the *Galilee*, and the San Francisco Maritime National Historical Park the stern of that same vessel. These are the sole surviving aspects of Turner's once-prodigious output.

17 Born in Nova Scotia in 1838, Doncaster migrated to the Pacific coast in 1856, and was employed in shipyards from Port Ludlow to Puget Sound. He honed his skills at the San Francisco yards of Middlemass & Boole.

old vessels and traditional practices to new conditions. The fleet they built was essential to lumber ports' prosperity and allowed loggers to tap the hinterlands to supply San Francisco and other markets with much-needed inexpensive building materials. In short, these ship-builders played an important if unspectacular role in the economic development of the American West and areas around the Pacific Basin. By the 1880s and into the 1890s, larger three-masted schooners entered the trade, but the major development to come was the introduction of steam. In due time, wooden lumber schooners transitioned to steam power.

Whereas early coastal steamers were experimental—converted sailing vessels outfitted with rudimentary boilers and engines—those utilized in the lumber trade were purpose-built from an earlier stage.¹⁸ These craft, however, retained many of the lines and features of their sailing predecessors.¹⁹ The similarity to sailing schooners was not coincidental, as those earlier craft served the industry well. Beginning in the late-1880s, northern mills constructed their own steam schooner hulls, loaded them with lumber, then thriftily towed these to San Francisco to offload their cargo and be outfitted with boilers and engines.²⁰ By the early twentieth century, steam-powered lumber schooners displaced the tried-and-true sailing schooners, much to the dismay of the doughty, grizzled veterans who protested the loss of their beloved sails, but grudgingly accepted that new technology was of great help in maneuvering in and out of dog-holes.²¹

Even by the late nineteenth century, steam schooners retained many of the lines and features of their predecessors: built of wood, they were beamy and shallow-drafted, with their engine far aft in a slab-sided deckhouse. They were small, seldom exceeding 200 feet, and frequently half that size. In time, they replaced the single-ended versions, featuring slab-sided deckhouses at the stern, with double-ended construction, with deckhouse amidships. This allowed for labor-saving machinery (including the twin-boom cargo rig, soon to become the standard on break-bulk freighters worldwide, but developed on West Coast steam schooners) to replace even more men, and reduced the time spent idle in port.²² In due time, they switched to iron and steel frames, a move pioneered by Robert Dollar. In the 1890s, Dollar commissioned a trio of 1,800-gross-ton steel-hulled steam schooners. Measuring 240 feet, they accommodated prodigious deckloads of lumber, with a capacity of 1.5 million board feet. In place of the triple-expansion engine, they featured reciprocating engines rather than the compound versions of their smaller steam schooner predecessors. Some 225 of these “Russian-Finn men-o’-war” were built and maintained by western lumbermen, who consid-

18 As early as 1864, *Jenny Jones*, a 95-foot sailing schooner, had been equipped with an engine, boiler, and propeller.

19 Aaron K. Golbus, “The Evolution of the Pacific Coast Lumber Schooner” (master’s thesis, San Francisco State University, 1996). See also Terry Ryan, “The Development of the Pacific Coast Lumber Ships,” *Journal of Nautical Research* 55, no. 3 (2010): 141–60.

20 Among the first was the SS *Point Arena*, built in 1887 by Alexander Hay of San Francisco and owned by the George Beadle Company of that city. She was joined the following year by *Newsboy*, a 108-foot, 249-ton built by Boole & Beaton in San Francisco for J. J. Shields, and later owned and operated by Robert Dollar. See John Lyman, “Pacific Coast Wooden Steam Schooners, 1884–1924,” *Marine Digest* (April 13–July 17, 1943).

21 Topics of class and ethnicity will be addressed in subsequent chapters. Suffice to say that many who were marginalized in mainstream American society—immigrants, the underclass, persons of color—found a more receptive environment afloat than ashore. Artificial social constructs such as race and class were secondary to the tangible attributed of strength, skill, and bravery, and became more malleable in the maritime milieu.

22 Of course, labor-saving devices could be seen in earlier versions, such as the twin cargo booms that graced single-ended vessels such as *Wapama*.

ered the craft workhorses of the Pacific. Nevertheless, wooden lumber schooners continued to be built, and by as late as 1925, 100 of these craft were still in service.²³

The steam schooner, though, was far better than the sailing craft that came before: able to sail straight into the wind, they sailed on a fixed schedule between dog-hole ports and the teeming markets of California.²⁴ Less apt to being encumbered by wind shifts and lulls, they frequently made the round trip between dog-hole and city of delivery in half the time required by sailing schooners and rarely needed tugboat assistance to navigate the shallow harbors and tight quarters of the Northwest coast. Despite requiring significantly larger crew sizes (eighteen rather than ten), the speed and predictability of passages combined with the more efficient cargo gear more than made up for the extra wages, fuel, start-up costs, and cargo space lost to engines, boilers, and bunkers.

Despite the advantages of steam, from an outward appearance, little had changed: masts and sails remained as auxiliaries in case the vexing engines were uncooperative. Belowdecks, however, things changed considerably: valuable cargo space was sacrificed to the compound engines and coal bunkering. Early prototypes generated only 100 horsepower, driving a single screw propeller at roughly eight knots. By the early years of the nineteenth century, a more efficient triple-expansion engine—manufactured principally by the Fulton, Main Street, or Union Iron Works of San Francisco—largely replaced their unsophisticated forebears. Another major change was that steam schooners afforded more reliable and faster transit, for both cargo and, increasingly, passengers, since the only way to travel before railroads was by sea. As ships grew in size, so too did the number of cabins available for passengers—an increasingly important and profitable concern to ship owners.²⁵ The provision of passenger service aboard cargo ships soon became standard for steam schooners.²⁶

By the 1890s, steam schooners proved so reliable and cost-efficient (even with the sacrificed cargo capacity and slightly larger crew sizes), they permanently displaced sailing schooners, relegating those craft to transpacific and inter-island trade (Matthew Turner continued to build sailing craft, such as *Galilee*, that dominated this commerce, setting speed records between California and Hawaii and Tahiti in the process).²⁷ Thus sailing lumber schooners continued to go down the ways of northern mill owners, destined for long runs to Australia, a distance that the steam schooners could not cost-effectively cover.

23 In 1923, the last wooden steam schooner, *Esther Johnson*, was launched by McCormick. She would haul lumber continuously until World War II.

24 As an example, from the mid-1880s (when steam schooners first appeared on the scene) until century's end (when they had displaced sailing schooners as the primary mode of lumber transport on the Pacific), San Francisco saw its population rise from 300,000 to 500,000 and Los Angeles grew from 10,000 to 100,000.

25 The case of the sailing schooner *Wapama* is illustrative. Built in 1915 at St. Helens, Oregon, for Charles McCormick of San Francisco, she was registered at 951 tons. With accommodations for fifteen passengers and the capacity to haul one million board feet of lumber, she was perfectly well suited to the coast-wise trade. *Wapama* was the last of 225 wooden steam schooners built on the Pacific coast.

26 The versatility of steam lumber schooners would be seen during the Alaska gold rush, when they were often chartered to ferry passengers to the Klondike.

27 California's longstanding trade with Hawaii had bounded in the 1870s as Hawaiian sugar began to find a market in the United States and rocketed following the Reciprocity Treaty of 1882 that allowed Hawaiian products to enter the mainland duty-free. A collection of medium-sized sailing craft carried most of the raw sugar to West Coast refineries—including the California and Hawaiian plant in Crockett; among the shipowners who prospered from the sugar trade was Swedish immigrant William Matson. Matson had stated his career as a San Francisco boat operator, bringing coal to the Spreckels refinery in the city.

Exchanging their lumber in Australia, they returned with cargoes of coal, copra, and assorted and sundry other items.

While lumber was necessary to house the new residents of California, so was the need to feed these persons. During the gold rush period, grain flowed to San Francisco, as food needed to be imported to the region; from 1860 to 1890, the grain export trade from San Francisco dominated West Coast deepwater activities. In the early years of the gold rush, food actually needed to be imported; the small-scale operation then in existence in places such as Hayward and Livermore were inadequate, and larger, later operations that came to Willamette Valley were little better.²⁸ Given these circumstances, it is hardly surprising that Chile's export of wheat to California grew by nearly 1,000 percent between 1848 and 1850.²⁹ The price of flour astounded locals. During winter 1848–1849, William Redmond Ryan found that in San Francisco, "Chile flour rose from \$8 to \$32 per 200 lb. sack in a week. Flour fetched \$100 per sack in the northern mines."³⁰ By 1852, flour sold for \$50 per barrel in San Francisco, \$60 per ton in Antioch, and for even more in the mines.³¹ Soon, however, as failed Argonauts turned to other occupations, California's agricultural output far outpaced local demand. While less dramatic and romantic, the discovery of wheat in California was as wonderful, and as lucrative, as the discovery of gold.

Shiploads of wheat and grain represented some of the wealthiest cargoes ever sent out through the Golden Gate as global connections linked San Francisco with markets from Australia to Great Britain.³² Since most of the grain went to foreign ports and its trade was not subject to protectionist legislation, the greatest number of trade ships were foreign-flagged, chiefly iron- or steel-hulled British ships and barks with sterling reputations. British control of the shipping, as well as of such ancillary businesses as marine chartering and insurance, further hampered American trade efforts. Heading around Cape Horn—the dim, storm-wracked cape at the bottom of the world that for centuries was the supreme test of men and manmade vessels—the grain was destined for European markets. Indeed, while the gold rush might well be regarded as the first major maritime event in California's history, the grain trade drew the greatest fleet of sailing ships ever to come to San Francisco. The grain trade, additionally, carried significance for global maritime history, as the principal trade of the world's deepwater sailing vessels in the closing decades of the nineteenth century involved the shipment of California wheat.³³ The dramatic maritime dimensions of California's agricultural history are the focus of our next area of investigation.

28 An often-told anecdote about the vagaries of the food market revolves around the person of Joshua Norton, a ruined rice speculator who lost his mind and declared himself Emperor Norton I of San Francisco. Other manifestations of the demand for food can be found in the ravaging egg wars on the Farallon Islands, and the introduction of Chesapeake Bay oysters—an invasive species that displaced the local variety—to the greater San Francisco Bay region.

29 Edward D. Melillo, "Feeding 'La Boca del Puerto': Chileans and the Maritime Origins of San Francisco," in *Gender, Race, Ethnicity, and Power in Maritime America: Papers from the Conference Held at Mystic Seaport*, ed. Glenn Goordinier (Mystic, CT: Mystic Seaport Museum Press, 2008), 119. See also Lary M. Dilsaver, "Food Supply for the California Gold Rush," *California Geographer* 23 (1983).

30 William Redmond Ryan, *Personal Adventures in Upper and Lower California, in 1848–9; With the Author's Experience at the Mines*, 2 vols. (London: W. Shoberl, 1850), 1:407.

31 Franklin Buck, *A Yankee Trader in the Gold Rush* (Boston: Houghton and Mifflin, 1930), 56.

32 By the 1860s, Australia was itself a major grain exporter. Its role in the California market was as a supplier of coal.

33 Rodman Paul, "The Beginnings of Agriculture in California: Innovation vs. Continuity," *California Historical Quarterly* 52 (1973): 16–27.

The rise of the California grain trade can be traced to developments half a world away. The outbreak of the Crimean War in the mid-1850s ended the supply of Russian grain to world markets. The shortage drove prices skyward and encouraged California growers—who were already encountering uncomfortably low prices at home—to send a handful of cargoes of wheat, flour, and barley to select Atlantic ports, then transship them to Europe. Once European millers learned how to grind it, California wheat became highly sought after for its hard, glutinous qualities, and it was often blended with local European varieties to produce a hybrid flour that quickly became popular in Europe.³⁴ The first, experimental, shipment of grain directly from California around Cape Horn occurred in 1858. While that venture was not successful, owing to the novel character of the grain and the ignorance of New York millers in how to manage it, another followed in 1859, when Californians, for the first time, raised a crop beyond their own needs.

The hearty California crop was able to withstand the 14,000-mile journey to Liverpool (and a journey that brought it twice across the Equator and within a few miles of the Antarctic Circle) remarkably well. By 1860, a strong bumper crop accompanying the July harvest resulted in the export of 1,087 tons (six million bushels) suggesting an expectation of continuous trade between California and external markets for years to come. Unfortunately, Mother Nature was not cooperative, with costly floods in 1861–1862 and again in 1863–1864 causing California to return to its unenviable position as importer of breadstuffs, followed by serious droughts in 1864–1865. The outbreak of the American Civil War also disrupted trade. With fewer US-flagged ships available to carry the goods and heightened marine insurance rates cutting into thin profit margins, industry survival was dubious.³⁵ However, prudent British investors were attracted to the industry, and kept an eye on developments in the region.³⁶ The first year of unbroken trade between the two ports was 1865–1866, and the results were encouraging enough that other investors flocked to the trade. Both a European drought in 1867 and then an extended period of wet weather there from 1875 to 1879, which drowned much of the local crop, forced English merchants to look to California for sustenance.

34 To a significant degree, the Pacific coast exported its grain in the form of wheat rather than as flour. The aridity of the great Sacramento and San Joaquin Valleys produced a hard, dry, and unusually white flour. These qualities protected it from insects, and rendered it peculiarly safe for long-distance sea voyages, but it presented some milling challenges. It needed to be made wet before grinding, and was only profitable when combined with the softer varieties of European and Atlantic Seaboard varieties. When it was received with great interest by the markets of Liverpool, the twin valleys began to develop into one of the great wheat regions of the nation; largely because of their output, the state became the second-largest wheat-producing state in the nation by the end of the nineteenth century.

35 The loss of US-flagged ships can be attributed to several factors. Depredations by enemy raiders, requisitioning by the government for military service, and sale to foreign flags to avoid both of these fates were the leading causes.

36 British investors were also attracted to California because the currency of the region was still backed by gold, unlike the inflated dollars then in circulation on the East Coast.

Balclutha

The flagship of the San Francisco Maritime Museum is without doubt the square-rigged, three-masted ship Balclutha. Serving in a variety of roles in her long working career, the ship is emblematic of any number of issues in West Coast maritime history. Long-distance trade, racial and class relations, the lumber and fishing industries, and other issues are all seen in her history. Indeed, by focusing on the particulars of this vessel, one could extrapolate many key features of Pacific coast maritime history in general.

Built by Charles Connell and Company of Glasgow, Balclutha was launched from the river Clyde in 1886. Steel-hulled, she was emblematic of the sailing vessels built in British yards that dominated deepwater trade in the waning years of the nineteenth century. Her crew of twenty-six, needed to handle the 1,689-ton 256-foot vessel, was likewise typical of the time. Originally built for the grain trade, her later career saw her carry sundry commodities from Great Britain and American East Coast ports to various Pacific locales, picking up nitrates from South America, lumber from the Pacific Northwest, and coal from Australia. She completed seventeen passages around Cape Horn to the Pacific, bringing diverse cargoes to West Coast ports, including a handful of stops in San Francisco. (She called at San Francisco on a half-dozen separate occasions; this was her only North American West Coast port-of-call.) Inbound, she carried coal, hardware, manufactured items, and spirituous liquors, which she exchanged for California grain. Following thirteen years flying the Red Duster, she was transferred to Hawaiian registry in 1899, and was the last ship to fly that kingdom's flag. In 1901, the vessel was admitted to American registry by a special act of Congress. Owned by the Pope & Talbot Lumber Company, she was inextricably linked to San Francisco from that time on. From 1902, she called that city home, and made annual runs to the Alaskan fishing grounds, 2,400 miles from the Golden Gate, when she was chartered to the Alaska Packers Association (APA).

Her cargo heading north consisted of nearly 100 cannery workers, 1,000 tons of supplies, and livestock, seamen, and materials for the seasonal run. The APA owned and operated nearly two dozen Alaskan canneries, and ships like Balclutha represented a tangible link to the United States for the isolated communities of the frozen north. A large majority of the cannery workers were Asian immigrants, who occupied cramped and foul-smelling quarters in the 'tweendecks. Dubbed the "China Gang," their numbers nonetheless included a good representation of Filipinos, Mexicans, and other nationalities. Their work involved butchering, cleaning, and trimming the fish before it was canned, a process made infinitely easier through the implementation of machinery via the derogatorily named "Iron Chink." They were joined on the voyage by Mediterranean and Scandinavian fishermen, who enjoyed comparatively luxurious accommodations, though the work they were engaged in was equally dangerous and grueling.

From 1904, following a grounding in Alaska, Pope & Talbot sold Balclutha outright to the APA, which operated her as Star of Alaska. She served in this capacity until her 1930 sale to a private individual who used her for entertainment purposes. Among her notable achievements during this time was an appearance in the film *Mutiny on the Bounty*, but she was slowly deteriorating and nearing an ignominious end. The Maritime Museum acquired her in 1954; in 1978, she was transferred to the National Park Service; and in 1985, Balclutha was designated a National Historic Landmark.

With the conclusion of hostilities, pent-up demand and pent-up capacity united; the ending of the war coincided with a cycle of better rainfall in California, and by 1866–1867 the state produced such a surplus that it exported twice as much wheat and flour as in any previous season. Enormous wheat ranches sprouted from the fertile Central Valley, transforming the Sacramento and San Joaquin Valleys into the “breadbasket of Europe.”³⁷ Owing to a system of mass production akin to an industrial plant, yields per acre averaged around twenty bushels (this would triple by the 1880s). Mechanized farm implements allowed greater acreages to be planted, harvested, sacked, and shipped. With the adoption of such machines as the mechanized reaper and thresher, it was common for California farmers to increase their production to over twenty acres per day.³⁸ The results were astounding: in 1848, the region had raised nothing and was a net importer of breadstuffs; by 1858, it was barely supporting its own population, although contemporary pundits saw great promise. Opined one: “it is now a well-ascertained fact that California stands without a rival in respect to her capacity for producing wheat and other grains . . . she produces in larger quantities, of better quality, with more certainty and with less labor than any other country in the world. The people of California ‘ate better bread, at lower cost, than any other on earth.’”³⁹ This observation seemed prescient: by 1868, California had raised a larger surplus than any other state in the nation, accounting for 10 percent of the national output, and generating some \$20 million in wheat sales alone, an amount equal to that coming from precious metals.⁴⁰

For the fiscal year ending June 30, 1868, San Francisco alone handled a little more than one-third of all the wheat shipped from the United States, a feat it matched the following year. In 1868, there were 193 ships chartered to carry grain from San Francisco; in 1869, that number was 240. The rush was on again. Indeed, between 1869 and 1899, California and, to a lesser extent her northern neighbors, sent to Britain each year somewhere between one-quarter and three-fourths as much grain as was exported by all the rest of the nation.⁴¹ Coincidentally, that very season marked a significant downturn in European output, causing deficient harvests that required local governments to dip into reserve stocks. The result

37 One of the earliest ranches was owned and operated by Hugh S. Glenn, a physician who had arrived in 1849 with little money. By 1880, he had acquired holdings variously reported at between 55,000 and 65,000 acres. He shipped the wheat from his ranch to the United Kingdom on his own account, chartering vessels to handle the harvest of over a half-million bushels. His career came to an abrupt end when he was shot to death by a former employee in 1883. Morton Rothstein, “American Wheat and the British Market, 1860–1905” (PhD diss., Cornell University, 1960).

38 One of the first steam-driven plows, nicknamed “Mayflower” in honor of its inventor, Philander Standish, was put on display in Martinez, California, on January 11, 1868. It was reputed to be able to plow as many as three acres per hour.

39 George Davidson, “Directory of the Pacific Coast of the United States,” *Hong Kong Monthly* 10 (April 1858): 456–62. The same source, in an even greater feat of prognostication, predicted “the cultivation of the grape has proved conclusively that this country produces this fruit in the greatest variety and abundance and in a few years will surpass the most extensive wine producing countries of the world . . . the true wealth of this country has but commenced” (459).

40 By 1869, the trade had expanded to 243,199 tons of wheat and 352,969 bushels of flour.

41 At the peak of the trade, 1881–1882, San Francisco alone freighted 550 grain ships (containing wheat and flour, plus an additional nine which contained flour alone) in a single season, and Portland 100 more. Most Pacific Northwest production—centered on Portland, Seattle, and Tacoma—was sent to San Francisco in small coasting vessels for transshipment to Europe, although by the 1880s a direct link had been established. Of the 559 San Francisco departures, 345 flew the Red Duster of Great Britain, and 149 the Stars and Stripes of the United States.

was a highly profitable grain trade (the price per bushel fluctuated between \$1.25 and \$1.82, settling mostly at around \$1.50, while shipping rates per ton ran from \$6 to \$38, averaging \$26) that revolved around the twin poles of San Francisco and Liverpool; in the words of one historian, “rural California and mercantile San Francisco became appendages to Victorian Britain.”⁴² As responsibility for carrying the crop and underwriting the marine insurance for the trade became a British prerogative, the California grain trade “became an almost perfect opportunity for Victorian economic imperialism” with openings for British shipping, insurance, finance, coal, and manufactured goods.⁴³ As the editor of *California Banker’s Magazine* put it in 1891: “Take a walk around San Francisco . . . see here the English insurance offices on the right and left. Here are the Thames and Mercy, the Liverpool, London and Globe . . . the Norwich, Union, Royal, Northern, Imperial, Queen, London and Lancashire, Liverpool-Underwriters, Lion, Phoenix, Sun, Universal, Scottish Union, North British, Guardian, Maritime, Marine, London Assurance.”⁴⁴ Leading British financial institutions, such as the Anglo-California bank, were influential in advancing loans on wheat shipments, becoming major players in San Francisco in the process. While other American wheat-producing regions paid homage to Chicago, St. Louis, Omaha, Milwaukee, or New York, those on the Pacific had but one overlord: Liverpool.⁴⁵ Due to the grain trade, exports from San Francisco grew four times faster than those from Atlantic coast harbors in the period from 1860 to 1882. To give a few illustrative statistics, consider the following: in 1882, grain constituted over 97 percent of all California exports; for the half decade ending with the 1885 harvest, the state produced 31.5 percent of all US grain exports, a figure that rose to 42.9 percent for the next five years.⁴⁶

In 1867, about 80 percent of California’s wheat and flour exports went to Great Britain and reports from England spoke of “the favor with which it was received in the Liverpool markets.”⁴⁷ That year’s harvest marked the beginning of a large and steady surplus, and local interests quickly seized the opportunity. In September, a group of merchants founded the San Francisco Produce Exchange receiving daily price quotes via cable from Liverpool and daily reports on crop conditions in all counties that routinely exported to the English market; this became the nerve center for a burgeoning international trade. When the transatlantic cable was completed in 1886, the tremendous increase in the speed of communication sparked a frenzy; there was now practically instantaneous communication with Liverpool, though the staples of conversation remained shipping rates, the Liverpool markets, and rain forecasts.⁴⁸ Relatively little of this cargo moved in American vessels. Until the mid-1870s, they carried less

42 Rodman Paul, “The Wheat Trade between California and the United Kingdom,” *Mississippi Valley Historical Review* 45 (December 1958): 391–412, quotation on 412.

43 Paul, “The Wheat Trade,” 399.

44 Quoted in Paul, “Wheat Trade,” 405.

45 The closeness of the relationship can be seen in the use of centals—hundred-pound gunney sacks--and not bushels as the preferred method of measure and shipment. This was found nowhere outside the British Empire save in the California grain trade. Even though it meant an extra charge against the wheat, it was considered necessary, as a safety measure, to ship the cargo in sacks, rather than in bulk.

46 During the peak year of 1880–1881, over 1.1 million tons of wheat and almost 920,000 barrels of flour headed out through the Golden Gate, an almost as large as the average annual exports of all dry cargo from San Francisco during the period 1925–1940.

47 Paul, “The Wheat Trade,” 400.

48 The focus on precipitation was understandable: a severe drought in 1871 cut that year’s San Joaquin Valley wheat crop in half.

than half—a percentage that did not increase even when a group of Bath, Maine, shipyards sent out a group of large, efficient, wooden-hulled “Downeasters,” what one maritime historian has called “the highest development of the sailing ship.”⁴⁹

En route from San Francisco to the English Channel, the cargo might be bought and sold several times; captains made to ports such as Falmouth, Cornwall, or Queenstown “for orders” and then proceeded to the final “discharge port,” which depended on the location of the mill that had become the final purchaser. While many assume that British dominance of the trade excluded Americans completely, this was not the case. Isaac Friedlander, a prominent and ruthless San Francisco speculator dominated the supply of inbound shipping, and it seems unlikely that enough ships would have found their way to the Pacific coast during this period had it not been for the activities of this prominent San Franciscan. Friedlander, described as a man of “farsighted vision and constructive instincts” had been a participant in the California’s first maritime event, arriving in 1849 aboard *South Carolina*, and was a major player in the second.⁵⁰ With almost unlimited credit at his disposal, he chartered vessels months in advance of the harvest, using crop reports supplied by local agents. When he calculated properly, he could force up shipping rates and make a handsome profit; when he was wrong, as he occasionally was, he could go bust. In either case, he supplied the shipping that moved the grain, and thus exercised tremendous pressure on California farmers. Hailed and condemned as “the grain king,” he controlled most of California’s shipping facilities and wielded a disproportionate influence over the price of grain. When he died in 1878, a dozen smaller entrepreneurs rushed to take his place. Among the most notable was George Washington McNear who built warehouses and wharves at Port Costa, a new and advantageous location far up the Bay on the Carquinez Strait. McNear’s Port Costa Warehouse and Dock Company, with a capacity of 70,000 tons of grain and outfitted with huge grain elevators and a 2,300-foot wharf, was the largest such facility in the world.⁵¹ When the Central Pacific Railroad completed its connection through Martinez in 1879, the advantages of Carquinez Strait for loading grain were at once realized.⁵² By 1884, grain wharves extended almost continuously along four or five miles of the strait. Oceangoing vessels, river steamboats, and the railroad could all conveniently connect here to take that year’s estimated harvest of forty million bushels.⁵³ Half the ships clearing San Francisco with grain for foreign ports loaded at Carquinez Strait; in years when freight rates to Europe were low, these anchorages were more than just seasonal ports-of-call. The four-masted bark *Butreshire*, for example, spent more than two years

49 According to Howard I. Chapelle, 975 Downeasters were built, mostly in Maine yards and mostly for the San Francisco trade, in the quarter century following the American Civil War.

50 On Friedlander, see D. Morgan, *Merchants of Grain* (New York: Viking Press, 1979).

51 With grain storage came rodent infestations. Professional ratcatchers, such as the ones who caught seventy of the vermin aboard the grain ship *Semantha* in one night, were employed to protect the cargoes. They did this by dropping lines down the ventilator, allowing rats to crawl up to the deck, where they were then chased out the scuppers.

52 Scott Akers, “History of the Grain Industry in Contra Costa County, 1859–1910” (master’s thesis, San Diego State College, 1971), 32. By that point, half of all grain ships were loading at various ports along the Carquinez Straits. During their extended stays, crews engaged in sailing regattas, and participated in cricket matches held in communities such as Martinez and South Vallejo.

53 The following years saw bumper crops of 1.7 million tons in 1880 and 1.3 million tons in 1881. The state’s last million-ton crop was in 1892. That year, only 39 US-flagged ships participated in the trade, as opposed to 234 foreign ships. A decade later, the scene was even more telling: of 159 vessel departures, just 10 were American, while 103 were British.

anchored off Sausalito, while *Cawdor* lay at anchor four years off Martinez waiting for a rise in homeward grain rates. Equipped with elevated double-track railroad lines, moving chain elevators, and other technical improvements, the Port Costa docks could accommodate more than a dozen ships at one time, and there was seemingly no end of customers.

Just as schooners were the preferred vessels for the coastwise lumber trade, there was a preferred craft for the grain trade. The 14,000-nautical-mile voyage between San Francisco and Liverpool by way of Cape Horn represented one of the longest commercial voyages in the world. The cost of coal for such a voyage would have been extreme; as such, only sailing vessels were employed in the trade. Ships and barks of 1,000 tons were adequate in the early years of the trade, but as the size of the crop grew, so too did the size of the ships engaged in the trade. By the 1870s, 2,000-ton vessels were appearing, and by the 1880s, it was not uncommon to see 2,500-ton craft anchored at the great grain ports of Vallejo and Martinez.⁵⁴ The bulky, low-paying nature of the cargo meant that the increased cost of transshipment (say, via isthmian railroad) would be too great; hence the willingness of shippers to withstand the climactic extremes of a Cape Horn sailing (the five-month journey took sailors from the hottest summer to the coldest winter, then back to the hottest summer). Of the various craft available for the journey, square-rigged wooden Downeasters were the chosen craft. These “medium clippers” had a relatively large cargo capacity, great strength, and required only half as many men in the crew as comparably sized craft, yet they still achieved very good speeds. Powerful and manned by the most experienced seamen, they were broadwaisted and tall, with gleaming skysails. Featuring a squarer stern in contrast to the typically rounded hull of the clipper, they were built with “made masts” (a reflection of the lack of adequately tall trees that could be used as masts—in response, Mainers ingenuously made their masts out of a number of pie-shaped pieces, banded together with iron), wooden anchor stocks, rope (rather than chain) steering tackle, oak framing, and southern pine planking. But while they eschewed some modern conveniences, they embraced others: side light towers, steam winches, windlasses, and rigging screws. Above all, they were beautiful, made by craftsmen with Euclidian passion for good-looking shapes. They were lofty and heavily sparred—although not so much as their clipper predecessors—and clothed in the symmetrical, snow-white canvas for which Yankee sailmakers had become famous the world around.⁵⁵ Named because they were built in Maine (east of the previous shipbuilding centers of Boston and New York and downwind of the prevailing westerlies) these vessels, called “the highest development of the sailing ship, combining speed, handiness, cargo-capacity and low operating costs to a degree never obtained in any earlier square-rigger,” set the standard for smartness and seamanship throughout the world.⁵⁶ Larger and as fast as their British counterparts, they did, in fact, deliver their cargoes in as good a shape as any other. At their best, they completed the voyage from California to the British Isles in 100 days, a marked improvement over the four-and-a-half-month sojourn common to most other ships.

54 The average grain trader was 1,250 tons, or approximately five times larger than the typical 275-ton vessel commonly encountered during the gold rush.

55 See Deirdre O'Regan, “Sailmaking in Nineteenth Century New England” (master's thesis, East Carolina University, 2001).

56 *American bark* was the preferred contemporary term, but the name stuck and, like *windjammer* became an accepted term in maritime history. Quoted in Bill Caldwell, *Rivers of Fortune: Where Maine Tides and Money Flowed* (Camden ME: Down East Books, 1983), 112.

Downeasters were to Maine what clippers had been to Massachusetts. Regrettably, the fixation on building wooden craft hindered the American merchant marine. Where other nations were forced by necessity to look for new technologies and building materials, taciturn New Englanders harvested the bounty of their nearby forests to continue building wooden craft, eschewing in the process technological development and savvy investment in maritime matters. While other nations, long since devoid of any comparative advantage in wooden ship construction, were forced to turn from forest to mine to locate shipbuilding materials, New England extended the era of wooden shipbuilding by at least a quarter century.⁵⁷ In shipbuilding, Maine, like the Pacific Northwest, had the advantage of being near the source of timber (indeed, many down-east vessels were built inland and dragged to the sea by teams of as many as 160 oxen). Moreover, labor was cheaper than in New York or Boston, and there was a long tradition of both shipbuilding and sailing among the leading families of the state. As early as the eighteenth century, Maine farmers built their own schooners from local oak and yellow pine. At that time, hundreds of schooners were built locally for use in the burgeoning West Indies trade, with Mainers transporting red oak barrel staves (with lumber available for \$8 per 1,000 board feet in Bangor going for \$60 in Cuba) to the Caribbean and returning with barrels of rum, coffee, and molasses.⁵⁸ The average Maine vessel grew from 129 tons in 1780 to 680 tons by the mid-nineteenth century. In the 1850s, the small yards congregated along the Kennebec River alone turned out 345 full-rigged ships, many built on contract for New York or Boston merchants at a lower cost than they could ever be built in those cities. The wooden yards of Maine soon began turning out dozens of ships and barks (ranging from 1,400 to 2,400 tons) to meet the demands of the California grain trade, which required sailing vessels.⁵⁹

As in previous years, vessels were something of a community enterprise, built and officered by local men and managed by a leading citizen. In many cases, they were family operations, and when a family owned a controlling interest of the ship, the family on board was the rule, not the exception. Up until the middle of the nineteenth century, the sons of the best families went to sea before the mast with a view to learning the ropes and moving to the quarterdeck, leading to a vast pool of professional seamen. In an incomplete list of Searsport, Maine, there were seventy-five recorded births at sea, and but one fatality; Fred Duncan, in his, *Deepwater Family*, reports being born dockside in a Downeaster in San Francisco in the 1880s.⁶⁰

If American yards were producing elegant ships more than capable of carrying

57 Iron steamers had been built along the river Clyde by as early as 1819. By 1854, when Americans were concentrating on wooden clipper ships, Lloyd's Register listed 156 iron vessels (98 steamers and 58 sailing), with the number of full-rigged ships up from 8 to 26 since 1852. By the 1860s and 1870s, hundreds of iron sailing ships were being produced annually in Scotland, England, Ireland, and Wales. The first appearance of a British iron ship in San Francisco was the 606-ton *Antelope*, built at Liverpool in 1845, which the first city directory notes was tied up at the Commercial Wharf, Clark's Point, in 1850. She was, in fact, one of the first full-rigged ships built entirely of iron, joining a pair of smaller vessels, the brig *Hoffnung* and bark *Fortschritt* built by the Germans in 1844 and 1845, respectively.

58 Like Spanish galleons that coordinated their sailing to avoid the tempestuous hurricane season, these vessels were laid up in the summer, allowing the Mainer to avoid yellow fever while also affording him the opportunity to tend to his crops and other responsibilities.

59 Between 1823 and 1903, the Sewall family yard of Bath alone turned out 105 craft, with a total tonnage of 130,953. The 350 other Maine operations added 5,000 vessels and 2.5 million tons to that figure.

60 Fred Duncan, *Deepwater Family* (New York: Random House, 1969).

the growing shipments of California wheat, why, then, were there not more in the trade? From 1872 to 1886, US-flagged ships constituted just over one-third of the grain fleet, with British iron and steel ships dominating the trade. As the years progressed, this became even more telling: between 1886 and 1892, US ships constituted less than 20 percent of the fleet, and by 1901 only 10 US grain ships cleared San Francisco, as compared to 140 foreign-flagged (including 103 British) vessels. One factor could be sheer numbers: between 1865 and 1900, New England launched 975 square-riggers. While seemingly impressive, this figure pales in comparison to the 3,000 that Great Britain built in the half-century ending with 1900. But volume is only one indicator: the full answer lies in the composition of the cargo purchasers. The buyers of the cargo were British and they demanded that their cargoes be insured with “standard British companies.” British insurers, notably Lloyd’s of London, preferred British iron ships to American wooden ones. They argued that iron ships were safer from fire, would stand unlimited driving into a head sea, were “tighter” and less liable to damaging leaks, and had more cargo space. Last, in case of disaster at sea, iron ships were likely to sink, thereby making the insurance quickly available to the cargo owner in contrast to a wooden vessel “which can more rapidly survive a shock, get to port with a badly damaged cargo, and then lead to disputes and litigation with insurance companies.”⁶¹ British ships and barks, which—being longer in proportion to their tonnage than the wooden Downeasters, with as many as four masts by the 1870s—earned a reputation for being “easy and hungry.” Embittered Americans claimed that British insurers were unjustifiably prejudiced against their wooden ships in favor of British iron ones.⁶² In the later years of the grain trade, British shipbuilders switched from iron to stronger steel, gaining even more of a comparative advantage.

Although displaced from the profitable grain trade, Downeasters nonetheless remained important players in California’s agricultural and maritime history, shifting their focus to importing nitrate-laden guano from the Pacific coast of South America to San Francisco for use in the Central Valley. Found primarily on the dry Chincha Islands off the Peruvian coast (and mined by imported Chinese laborers who worked under near-slave conditions) guano kept Downeasters in business for longer than anyone would have imagined.⁶³ The Chinchas contained up to two hundred feet of compacted guano deposits, and from the 1840s until the mid-1880s there were often two hundred ships lying at anchor, waiting to take this cargo to ports near and far.⁶⁴ Tens of thousands of tons made its way through the Golden Gate, destined for California’s Central Valley. Originally, guano—made up of bird droppings mixed with the remains of the birds themselves—was looked down

61 Morton Rothstein, “American Wheat and the British Market, 1860–1905” (PhD diss., Cornell University, 1960).

62 In 1881, 62 percent of the grain was carried in US ships; that dropped to 27 percent the following year and to 14 percent by 1891. That year, the four-masted *Shenandoah*, driven by her magnificent spread of two acres of canvas, carried the largest grain cargo on record: 112,000 centals (about 5,300 tons) worth some \$175,000 (which, incidentally, was the cost of her construction).

63 See Gregory T. Kushman, *Guano and the Opening of the Pacific World: A Global Ecological History* (Cambridge: Cambridge University Press, 2011).

64 Gaddis Smith, “Agricultural Roots of Maritime History,” *American Neptune* 44 (1984): 5–10.

upon and seen as a reprehensible cargo, one befitting only second-class vessels.⁶⁵ But by the 1850s, the trade developed to so stupendous a scale that a contemporary writer in *Hunt's Merchant Magazine* argued that the nitrate-rich guano deposits in the Chinchas were intrinsically more valuable than the gold mines of California.⁶⁶ Between 1851 and 1872, ten million tons of this fertilizer, at an annual value of \$20 to \$30 million, was brought north to California, a goodly portion of this carried in Maine vessels.⁶⁷ The cargo was worth its weight in human misery, as thousands of Chinese migrants perished in the noxious conditions, in what is rightly considered a nineteenth-century version of chattel slavery. It is a fitting example of the business practices that embraced an unchecked exploitation of both natural and human resources in an unsustainable manner.

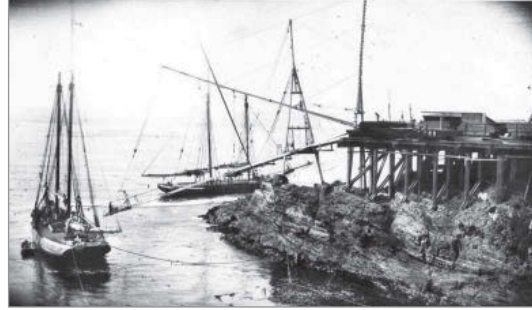
While the trade and transport of lumber, grain, and assorted general cargo might have been the most profitable and prominent of maritime activities in California in the half century following the Gold Rush, they were by no means the only ones. The next chapters will look at fishing and whaling, as well as at trends in immigration, transpacific commerce, and coastwise trade.

65 The Chinchas are located in the Humboldt current, a path more crowded with marine life than perhaps any other. These fish provide abundant food for millions of seabirds, whose droppings accumulate on the arid islands, where no rainfall is present to wash it into the sea. See David Hollett, *More Precious than Gold: The Story of the Peruvian Guano Trade* (Cranbury, NJ: Associated University Presses, 2008).

66 Hollett, *More Precious than Gold*, 17.

67 For a good treatment of the guano trade, see Richard King, "The Chinchas and the Guano Rush," *Maritime Life and Traditions* 25 (Winter 2004): 48–61. In addition to guano, alfalfa was introduced to California agriculturists from the similarly conditioned Mediterranean climate of Chile.

Loading lumber via overhead sling or wire chute was a dangerous task that tested the nerve of the most experienced seamen. This image shows the conditions that lumber sailors faced along the Mendocino coast as they load a vessel via lumber chute.



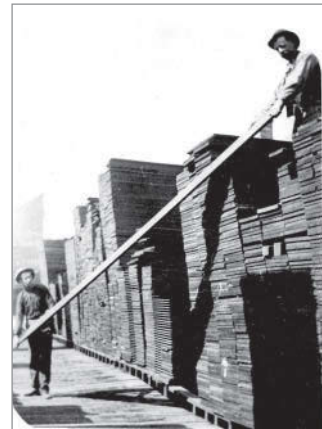
Courtesy San Francisco Maritime National Historical Park, E11.22.037.

Lumberyards often built their own craft on site, in a penurious example of efficiency. Here, the schooner *Electra*, built by Thomas Petersen at Little River is nearing completion.



Courtesy San Francisco Maritime National Historical Park. E4.6, 316n, pl.

Handling the prodigious quantities of lumber required the use of longshoremen in San Francisco and other Pacific ports. Here, employees of the San Francisco-based McDonald and McKinnon yard stack lumber.



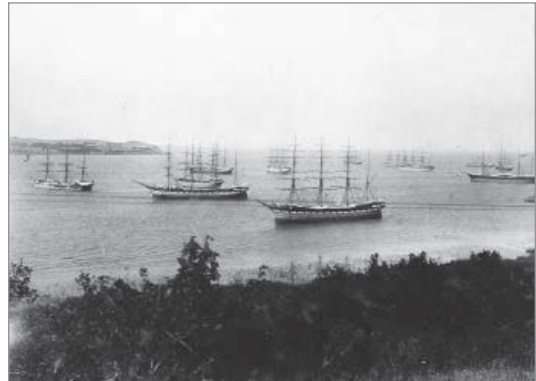
Courtesy University Library, University of California Davis. A.J. McKinnon Collection.

Downeaster William H. Macy was built in Rockport, Maine, in 1883 and entered the Cape Horn trade not long after. She and her kind extended the wooden shipbuilding tradition in New England by at least a generation, and she is representative of the last American built wooden ships to carry cargo around Cape Horn.



Courtesy San Francisco Maritime National Historical Park. A12. 4244.

Grain ships awaiting their orders at anchor in the Carquinez Straits. Often, vessels would wait for months—sometimes years—at anchor, anticipating favorable rate changes. Crews routinely participated in regattas, cricket matches, and other diversions to pass the time.



Courtesy San Francisco Maritime National Historical Park. Morton-Waters Collection, C20.233n1.

Balclutha, now the flagship of the San Francisco Maritime National Historical Park, was once part of a tremendous grain fleet that served the West Coast of North America. At the height of the grain trade, 559 vessels participated in one year. Here she is on one of her many trips around Cape Horn.



Courtesy San Francisco Maritime National Historical Park. A6.35795pl, n.

CHAPTER 7

FISHING AND WHALING

While the lumber and grain industries were among the most important from a maritime perspective in post-gold rush California, they were by no means the only ones dependent on access to the seas and rivers for their existence. Ships and boats associated with coastal commerce, inland navigation, the movement of passengers and goods, and assorted activities are covered in subsequent chapters. Perhaps no industry, though, relied more on the maritime milieu than those that plied the waters for the rich resources provided by fish and whales. The twin activities of fishing and whaling played a prominent role in the economy, ecology, and society of California from an early period, but never more so than in the years between the American Civil War and America's entrance into World War I. This chapter proposes an investigation of these industries, while also looking at the social impact that fishing and whaling played in California and in the lives of their practitioners.

The ability of indigenous Californians to harvest the riches of the sea are well documented, and early Euro-American settlers in the region were similarly taken by the relative abundance of shellfish and other marine life that was readily available. Likewise, as we have seen, bartering resources such as otter pelts was routine, continuing a long tradition of using the maritime environment for both sustenance and trade before the gold rush. As with other activities, that event transformed California fisheries, turning them from what were essentially subsistence activities to commercial ones. During the late 1840s and into the early 1850s, California's growing population required food but produced almost none. Soon, though, men who failed at the mines turned to all sorts of other endeavors, one of which, naturally, was fishing. As seen earlier, this situation stimulated both agriculture in the Central Valley and a rich fishing industry in the state's rivers, lakes, and ocean.

Commercial salmon fishing started on the Sacramento River as early as 1852; within a half decade, there were 100 boats engaged in this operation. Salmon fishing employed roughly 200 fishermen and half again that number were employed in shoreside occupations, curing and pickling some 200,000 fish. Soon, technology developed especially suited to the industry. By 1864, the first California cannery had opened on the Sacramento River.¹ Just four years later, local entrepreneur J. J. Griffin developed a double-ended salmon fishing boat, known as the "river gill-netter" to better process the catch.²

The salmon runs of the Sacramento River were the most intensely ever fished: in both 1880 and again in 1883, some 1,500 boats, employed by twenty-one different canneries, netted more than ten million pounds of salmon. As early as 1870, state officials recognized the importance of this activity: "The salmon is the most important visitor to our rivers. It has appropriately been called the 'King of Fish.' The richness of its flesh, its large size, the certainty of its annual return from the ocean, the rapidity with which, under favorable conditions, it is multiplied, all render it an important article of human food. It has probably

1 Operated by Hapgood, Hume, and Company, it was located on a barge in Yolo County.

2 Griffin's yards were located at Broderick, just across the river from Sacramento. From 1885 onward, the industry was in decline, and the last cannery closed in 1919.

been the chief source of subsistence to more people than any other food.”³

While the salmon may have seemed an inexhaustible resource, it was soon clear that such was not the case. By the early twentieth century, the salmon fisheries centered in the frigid waters of the Pacific Northwest and Alaska became remarkably profitable, though still controlled by California (in particular, San Francisco) interests. When the local California catch was unable to satiate the diets of Argonauts, more lucrative grounds were sought outside the immediate region. Soon, commercial salmon fisheries were seen on the Columbia River and on Puget Sound, though remaining relatively inconsequential until the introduction of canneries there (in 1866) and staying small relative to their California counterparts for some years after.

The Columbia River canneries were next to be developed. Recognizing that the stock of Sacramento salmon were not without limits, visionaries began to look for new grounds to exploit. The first operation, led by Maine natives William, George, and John Hume (veterans of the Sacramento fishery who had inaugurated cannery operations there) opened in 1866. That first year, the brothers produced 4,000 cases, each of which held four dozen one-pound cans of salmon. The innovative Humes introduced another concept to the region, when, in 1871, they hired Chinese laborers to work in the cannery operations (the fishing itself being done by Scandinavian or Southern European immigrants who manned near 2,000 boats, the nets of which, “if laid together, would run 545 miles”).⁴ By 1881, there were around 4,000 Chinese employed at approximately fifty Columbia River canneries, including more than two dozen at Astoria alone.⁵ By 1895, these facilities produced over 635,000 cases of canned salmon, which found eager consumers from Australia to Great Britain and at all points in between. But all was not well for the Columbia River canneries. A combination of factors, including overfishing, the economic depression of 1893 and, most tellingly, the development of rival Alaskan grounds, spelled the end for the Columbia River fishery. Though canneries would continue to operate until the 1940s, the boom-and-bust cycle that had marked the Sacramento salmon runs followed the Humes and their ilk to the Pacific Northwest.

The Alaskan salmon trade had a tremendous impact on West Coast maritime history: from 1896 on, the yearly export of Alaskan salmon was worth more than the 7.2 million paid to Russia for acquisition of the territory in 1867.⁶ Until the development of oil fields in 1957 at Kenai and in 1977 at Prudhoe Bay, the salmon fishery remained the single most important industry in Alaska, remaining economically more important than mining, lumbering, and the fur trade combined. The process was not uncomplicated: the fish were highly perishable and had to be dried, salted, frozen, or preserved shortly after being caught. Canneries provided the most viable alternative, requiring shoreside facilities near the fishing grounds. The result was a major economic impact on local Alaskan communities.

Salmon fishing was not an external activity foisted on ignorant Alaskans. Long before

3 California Fish Commission, *Report of the Commissioners of Fisheries of the State of California for the Years 1870 and 1871* (Sacramento: California Department of Fish and Game, 1872).

4 Richard White, *The Organic Machine* (New York: Hill and Wang, 1995), 40.

5 The first commercial fisheries in California were established by Cantonese gold rush immigrants who operated a thriving fleet of junks that was gradually strangled into a smaller and less competitive industry by racist regulations and laws. The first such community would be found in San Francisco’s Rincon Point.

6 The first recorded catch was some two million cases, valued at \$3,375,000 in 1889. *US Commission on Fish and Fisheries*, 6 (Washington, DC: GPO, 1888), 7. Alaskan production totaled 4 million cases in 1912 and reached an all-time high of 6.9 million cases in 1941.

the Russians or Americans came on the scene, natives had harvested salmon by a variety of means. Using dip nets, squaw nets, wicker traps, fish wheels, bow and arrow, spear and gaff, trolling, and other methods, Aleut and other native fishermen provided resources that were central to the local diet. The native bounty was also dried and used as a buffer against the long winter months. When the Russians moved into the area, they introduced the process of salting salmon. By the 1860s, they were operating a pair of salting facilities: the first was located at Old Sitka, and the second, opened in 1868, at Klawock on the West Coast of Prince of Wales Island. Here, the fish were split, boned, salted, and packed in barrels.⁷

Pushed north by declining fish stocks in the contiguous United States, and locked out of the Canadian fisheries, American entrepreneurs looked north to Alaska for new fishing ground to develop and exploit. They were by no means the first Americans interested in Alaska's fishery. A thriving codfishery, with a fleet based in San Francisco, had existed since shortly after the Civil War.⁸ A shore station was established at Pirate Cove on Popof Island in the Aleutian chain, but fish were mostly processed back in the contiguous United States. By 1863, there were as many as twelve or fifteen San Francisco-based vessels employed in the Alaskan codfishery, with most headed to the Bering Sea and an odd few to the Sea of Okhotsk. An average of ten vessels fished annually in Alaskan waters for cod between 1860 and 1892, and prior to World War I, cod was the major catch of the Alaska handline industry.⁹

One schooner in the 1870s attempted to bring back Alaskan salmon, salted in bulk in the hold like cod, but the venture was never repeated. Instead, a method of salting the salmon in barrels was developed, and several such cargoes reached San Francisco at the end of each summer until the 1920s. Some of the shippers were known to spend the winter on the road, selling their barrels of fish to the saloonkeepers of the Central Valley, returning to San Francisco in the spring to fit out their schooners for another voyage. Among the notable participants in this trade was *C. A. Thayer*. Now a museum ship berthed at San Francisco's Hyde Street Pier, the schooner is most known for its role in the West Coast lumber trade. However, for a dozen years (1912–1924) she made seasonal runs to Alaska, departing in April with a complement of fishermen, cannery workers, and supplies and returning at the end of each summer with barrels of salted salmon. For some time afterward (1925–1930), *Thayer* participated in the nascent Alaskan codfishery, illustrating another theme in the region's maritime history.

In addition to salt-packed salmon, there were attempts to introduce canneries to the region. The first Alaskan canneries opened in 1878, occupying the old Russian salteries,

7 The salmon industry on the Pacific Coast was also the product of the Hudson's Bay Company's Fort Langley, established in the 1830s on the Fraser River in British Columbia. Traders shipped casks of preserved salmon to distant ports, including Hawaii, with the Fraser becoming the center of an extensive salmon fishery and cannery operation, the first of which was operated by Joseph Deas, an American-born black refugee from US slavery, on an island that bears his name.

8 Among the first San Francisco vessels involved in the Alaskan cod trade was the brig *Timandra*, acquired and captained by Matthew Turner. The cod were routinely caught by hook and line, in the manner of the Grand Banks fishery, and salted on board. The three-masted schooners *Louise* and *William H. Smith* were the last San Francisco vessels employed in this trade, departing the Golden Gate in 1931 and returning two years later. *Louise*, a bald-headed three-masted schooner, had been built by Hans Bendixsen at Fairhaven, California, in 1882.

9 Charles Melville Scammon, "The Pacific Coast Cod Fishery," *Overland Monthly* (May 1870): 436–40. See also J. L. Weaver, Jr., "Salt Water Fisheries of the Pacific Coast," *Overland Monthly* (August 1892): 149–63.

and by the 1890s, these employed more than twenty San Francisco-based sailing ships. As the Cape Horn trade dwindled, old ships gravitated to West Coast ownership, many finding employment as tenders for salmon canneries in Alaska. These sailed north each spring, carrying fishing boats, lumber with which to enlarge cannery buildings, machinery, coal, tin plates for cans, and all the food and supplies needed for the summer's operation. Fishermen signed on as seamen to sail the ship, and a crew of Chinese cannery hands was carried as passengers.¹⁰ At the end of a successful season, the ships sailed back with cargoes of canned salmon. The growth was rapid and extreme: by 1891, there were thirty-seven competing canneries. That same year saw the first hatchery open in Alaska, with a trio of canneries taking salmon from the Karluk River on Kodiak Island. Several other privately sponsored hatcheries followed. Salmon provided 80 percent of the territory's tax revenue in those years.

Generally, the Alaska fishery divided into two regions: southeast and western Alaska, with the entire area separated by the Aleutians. Most of the early operations concentrated on the southeastern market, until the Arctic Packing Company pushed into the western region, opening a cannery at Nushagak in 1883. While the western fishery was more profitable (owing to the presence of sockeye salmon) only large, well-financed operations could afford the increased associated costs (the relative isolation of the western canneries meant that more capital was required to establish, maintain, and operate them, and nearly all labor had to be imported from San Francisco and Seattle) attracted. By comparison, independent contractors operated out of the southeast fisheries. The relative inaccessibility of the western fishing grounds called for ships that could sail across more than 2,000 miles of open, often stormy seas, bringing a season's pack of salmon home in the fall. Supplies and workmen could be taken to the cannery and fishing sites by sea only: communities such as Kvichak, Nushagak, Naknek, and Chignik owed their existence to these yearly connections. Production soon outpaced demand and prices plummeted: to counter this situation, a temporary organization, the Alaska Packing Association, formed in 1891. Thirty-one of the thirty-seven competing operations joined, agreeing to operate just nine canneries in the following season. The strategy worked, and the "temporary organization" led to the formation of a corporation that nearly monopolized the Alaska salmon fishery thereafter.

Incorporated in 1893, the Alaska Packers Association (APA) was a model of Gilded Age economic efficiency. Led by Henry Fortmann, the APA succeeded in aligning twenty-eight of the thirty-one canners then in operation, developing a profitable method of seasonal canning plants with attached fishing crews.¹¹ Operating a fleet of thirty-two square-riggers (including nineteen that bore the trademark "*Star of . . .*" designation), the APA made seasonal runs to Alaska, bringing scores of Chinese laborers to man the canneries.¹² Alterations to the vessels (including an expansion of the poop deck by some 75 feet) provided ample living space for the Italian and Scandinavian fishermen. The Chinese cannery workers, further segregated, lived forward in the cramped accommodations of the

10 Robert A. Nash, "The 'China Gangs' in the Alaska Packers Association Canneries, 1892-1935," in *The Life, Influence and the Role of the Chinese in the United States, 1776-1960*, ed. Thomas W. Chinn (San Francisco: Chinese Historical Society of America, 1976), 257-83.

11 Fortmann, who had previously led the Arctic Packing Company, would remain president of APA until 1922.

12 Harold Huycke, "Star Fleet" *Yachting* (February 1960): 1-5, and Harold Huycke, "The Great Star Fleet," *Yachting* (March 1960): 1-5.

‘tween deck.¹³ Flying the distinctive swallow-tail pennant of APA, the ships would head north on seasonal runs with a full complement of crew and cargo and return with the onset of winter, usually laying up for repairs in the Oakland Estuary at a shipyard on the foot of Alameda’s Paru Street.¹⁴ Repairs were needed, as navigating in fog-shrouded and unmarked channels was hazardous at best. Although several ships survived near-catastrophic groundings, other APA ships fell victim to the dangers of Alaska’s waters. *Raphael* wrecked near Karluk in 1895, and *James A. Borland* was lost on Gugidak Island the following year. In 1898, the full-rigged *Sterling* gave her name to the shoals that mark the waters of the Bering Sea; two years later, *Merom* was wrecked on the beach at Karluk. In the worst loss in the history of the APA, *Star of Bengal* was lost with 110 souls after a spectacular wreck off Fort Wrangell in southeastern Alaska in September 1908.

Originally, the APA utilized wooden Downeasters, many of which were chartered or leased from lumbering operations in the Pacific Northwest, but by 1900, the company turned to a fleet of secondhand iron and steel square-riggers. Ships were loaded with supplies for the 2,500-mile run from San Francisco to Alaska; the whole summer’s operation was sustained by the supplies and manpower the sailing fleet carried. At the end of the fishing season, the canned and boxed salmon were loaded in the holds of the southbound ships. The entire operation lasted a scant seven months, but required a Herculean effort on the part of employees. With a far-flung empire rivaling the vertically integrated oil and steel industries’ monopolies, the APA owned everything: ships, labor, and processing plants. Of course, not all canners joined the APA. By 1898, there were 55 independent canneries working the Alaska waters, including Libby, McNeil & Libby; the Nakat Packing Company (a subsidiary of A&P); and the Northwestern Fisheries Company (led by Frank A. Peterson and L.A. “Hungry” Pedersen), some of which remained in operation well into the twentieth century.¹⁵ Newcomers were undeterred by the might of APA: between 1914 and 1918, 53 new canneries opened, as the industry expanded into canning pink and chum salmon. In 1917, with 118 canneries in operation, the region generated nearly six million cases of salmon, valued at \$46 million. Two years later, 159 operators produced nearly nine million cases. None, however, could rival the success of APA.¹⁶

With an effective lobby in both Juneau and Washington, and only a negligible government presence in the industry before the turn of the twentieth century, the APA prevented government regulators from squelching their profits. While the Treasury Department was tasked with enforcing fishing regulations in Alaska since 1868, it moved slowly. Their first

13 By one estimate, 86 percent of the cannery workers were Chinese; this amounted to about three thousand seasonal Chinese workers labored in packing plants. By 1912, when cannery operators were openly calling for the repeal of the Chinese Exclusion Act, only 40 percent of cannery workers were Chinese, with most hailing from Mexico, Puerto Rico, and the Philippines. US Congress, Senate. *Alaska Fisheries: Hearings before the Subcommittee of the Committee on Fisheries* (Washington DC: GPO, 1912), 135.

14 Antioch, at the mouth of the San Joaquin River, was another favorite lay-up port for old ships, as the freshwater found there kept the wood of a ship’s hull free from marine borers such as the teredo worm, introduced into local waters from the South Pacific in the 1860s. The Red Salmon and Nanek Packing Companies, rivals of the APA, frequented this port as late as the 1930s.

15 The catch that year totaled 965,997 cases. Joan Antonson Mohr, *Alaska and the Sea: A Survey of Alaska’s Maritime History*, miscellaneous publication No. 24, Office of History and Archaeology, Alaska Division of Parks (1979), 65–67.

16 A number of these independent canners—as well as APA—continued to operate into the 1960s, and Bristol Bay still boasts an active salmon cannery.

action was an 1889 law that forbade the use of barricades employed by canners, which prevented salmon from reaching their spawning grounds. Even here, progress was slow, and not until 1892 was money appropriated to hire an inspector and assistant to enforce this action. Late that same year, President Benjamin Harrison signed a bill to preserve the dwindling fish stocks, reserving Afognak Island and all waters within one mile of its shore as a cultural preserve, with no salmon to be taken except by Alaska natives for subsistence purposes.¹⁷

Predictably, the absence of effective regulations led to overfishing, with the canners themselves first taking action to police the industry. The first legitimate government response was not seen until 1899, when packers were taxed four cents per case; more rigid enforcement came after 1903 with the establishment of Bureau of Fisheries in the Department of Commerce and Labor. New mandates required each company to establish hatcheries capable of producing four times the number of salmon taken. Few complied. When the stick failed, authorities turned to the carrot. Beginning in 1906, hatchery companies would be reimbursed by the government. At that time, the federal government began operating two hatcheries of its own: one at Ketchikan in southeastern Alaska and another at Afognak Lake on Afognak Island in the south central part of the territory. Between 1906 and 1920, the federal government spent \$525 million on their own hatcheries and another \$600 million on rebates to those operating their own facilities. The plan was a disaster and a political boondoggle. In 1907, for example, during a year in which APA generated \$3 million in profits, the subsidy they received for operating a pair of hatcheries reduced their federal taxes to less than one dollar.

The salmon fishery, while important, would not be able to sustain these profit margins. Overfishing and changing consumer tastes led to a steady decline and the last voyage north was made by *Star of Alaska* in 1930—still afloat at the San Francisco Maritime National Historical Park's Hyde Street Pier under her original name, *Balclutha*. Another of the fleet, *Star of India*, retired in 1923, is preserved at the San Diego Maritime Museum. Still, thanks to increased regulations and more efficient fisheries management, Alaskan salmon remains a viable fishery, and while no longer approaching its historic highs, remains among the state's major industries.

Salmon, while the most numerous and profitable commercial fish on the West Coast, was not the only one taken—by 1889, sardine fisheries dotted the central California coast, giving rise to the famous Cannery Row in Monterey. At its height, the sardine industry in Monterey employed 3,500 people at nineteen canneries, with over 450 boats catching over a quarter-million tons of fish.

17 In 1922, the reserve was enlarged and renamed the Alaska Peninsula Fish Reserve; later that year, the Southwest Alaska Fisheries Reserve was likewise established. In 1924, both were revoked after Congress passed an "Act for the Protection of the Fisheries of Alaska and for Other Purposes," which authorized the federal government to manage Alaska fisheries for protection and conservation of the fish until Alaska became a state. This act authorized the Secretary of Commerce to reserve areas, and set standards for fishing gear (including nets, boats, and traps) to limit harvest in the area. Federal regulation of Alaska's salmon fishery is somewhat unusual in that regulatory responsibility was generally the purview of a particular territory.

China Camp

One of the more than two dozen Chinese shrimp-fishing communities that ringed San Francisco Bay was located in San Rafael, on the northeastern shore of Point San Pedro. What is now China Camp State Park was once one of the largest and longest-lived of these communities. The 1870 census recorded 77 individuals living in 15 dwellings, but by the following enumeration, there were 469 denizens, of whom 368 were directly involved with the shrimp fishery. Others included a teacher, physician, and minister. During the 1880s, nearly 500 Cantonese immigrants called this bucolic site home, and the community featured a marine supply store, three general stores, and a barbershop.

Before racially inspired legislation forced them from the industry, Chinese were heavily represented in the San Francisco shrimp fishery. Using locally available woods, Chinese craftsmen constructed traditional junks and sampans, and used traditional, though peculiar, cone-shaped nets staked out at right angles to the tide, to collect their catch. Dried shrimp were exported to China, or sold locally by itinerant peddlers. It was a lucrative business, and one of the few remaining to Chinese residents of the Golden State. By the 1890s, however, hostility, violence, and racist legislation had taken even this from the Chinese, and they were forced to abandon the practice. Thankfully, their departure did not mean the loss of their skills and traditions to subsequent generations.

In summer 2003, a team of volunteers headed by the Small Craft Department of the San Francisco Maritime National Historic Park launched a replica junk *Grace Quan*, which was crafted using traditional techniques and locally available materials. The 43-foot replica—painstakingly recreated from period photographs, archaeological evidence, and assorted other information—closely resembles the vessels that earlier generations of China Camp fishermen used. It is currently housed among the collection of historic ships berthed at Hyde Street pier.

Today, China Camp represents one of the few undeveloped stretches of waterfront along the Bay, and is the home to efforts to restore the tidal wetlands to their original condition. The site is listed on the National Register of Historic Places, and is managed by the State Parks Commission.

Likewise, a vibrant fishing community was found in San Francisco. Today, San Francisco's Fisherman's Wharf is the second-most trafficked street in the state (after the Disneyland Promenade) and caters to tourists from near and far, but it was once home to a vibrant fishing community.¹⁸ The original location of San Francisco's fishing community was at North Beach, between Telegraph and Russian Hills, at the foot of Powell and Mason Streets. In 1872, the state legislature provided for the creation of Columbus Avenue (in the saddle between the aforementioned hills) to North Beach, and for the setting aside, "for the sole and exclusive use of the fishermen of the city and county such place or places that shall be deemed proper and sufficient."¹⁹ This was at the foot of Union Street, under Telegraph Hill, where Fisherman's Wharf remained until 1900, when the State Board of Harbor

18 Alessandro Baccari, Jr., *San Francisco's Fisherman's Wharf* (Mount Pleasant, SC: Arcadia Publishing, 2006).

19 John Muir, "Tides of Change: Fisherman's Wharf, 1870–1930," *Sea Letter* 58 (Summer 2000): 8–13

Commissioners set aside the present location for the use of commercial fishermen.²⁰

Chinese immigrants, disappointed by their luck in the mines or displaced by racist-inspired legislation (for example, the Foreign Miner's Tax of 1854), turned to fishing; their stout junks and nimble sampans, with battened lug sails, familiar on the Bay from an earlier period in pursuit of shrimp.²¹ With the completion of the transcontinental railroad, their numbers swelled considerably. By 1870, there were nearly thirty shrimp camps in the San Francisco Bay Area alone, ranging from a few dozen to several hundred residents—estimates place the number of Chinese fishermen in the Bay at over three thousand.²² Replete with schools, benevolent associations, temples, gambling dens, drying and processing sheds, and saloons, they provided community for Chinese immigrants where none could ordinarily be found.²³ Fishermen, fish peddlers, wholesalers, and others involved in the processing and sale of the catch made up the majority of the camp's populace, although others, such as teachers and temple keepers, fleshed out this complement. Additional communities were found in San Diego, Monterey, on offshore islands, and in the Sacramento and San Joaquin delta, where Chinese fishermen sought shrimp, barracuda, abalone, and other marine resources.²⁴

Before long, a series of laws were passed designed to force the Chinese from the fisheries. In 1860, the state legislature mandated a \$4-per-month tax on the Chinese fishermen (at a time when monthly incomes reached but \$20 during the busiest of seasons and rarely rose above \$600 yearly). The state's first fishing license bill applied only to "Mongolian" fishermen. Asian men, but not their white competitors, were required to purchase state licenses to fish.²⁵ Subsequent legislation aimed to ban the Chinese from commercial fishing (1880), forbade the export of dried shrimp (where 90 percent of the catch was sent) and outlawed the use of bag nets favored by Chinese fishermen (the technique favored by the Chinese shrimpers was to stake out nets at right angles to the tide and let the racing water fill them with shrimp.) Arthur McEvoy revealed in his seminal work, *The Fisherman's Problem*, that California's legislative efforts to preserve fish stocks in the late nineteenth century were

20 The association between today's Fisherman's Wharf and restaurateurs is not new. In 1849, near the present-day site of Hyde Street Pier, Genoese immigrant Giuseppe Buzzoro opened the city's first Italian restaurant aboard a sailing vessel whose crew had deserted for the gold fields. His most popular dish was a meat and fish soup known as ciopin. *San Francisco Progress*, August 3, 1974.

21 Junks ranged from 40 to 60 feet, with a beam of 12 feet. Lacking a keel, they relied on a sternpost rudder for stability. Sampans are flat-bottomed craft, designed to work inshore. Ranging from 15 to 25 feet, with a breadth of 2–3 feet, they could easily be rowed and pulled up onto beaches where docks were nonexistent. See Linda Bentz, "Redwood, Bamboo, and Ironwood: Chinese Junks of San Diego," *Mains'l Haul: A Journal of Pacific Maritime History* 35, nos. 2–3 (1999): 14–21.

22 L. Eve Armentrout-Ma. "Chinese in California's Fishing Industry, 1850–1941," *California History* 60, no. 2 (1981): 142–57.

23 Robert Nash. "The Chinese Shrimp Fishery in California" (PhD diss., University of California, Los Angeles, 1974). See also Murray Lee, "The Chinese Fishing Industry of San Diego," *Mains'l Haul: A Journal of Pacific Maritime History* 35, nos. 2–3 (1999): 6–8, 10–13.

24 For a good local treatment of Chinese fishing communities in Southern California, consult Arthur F. McEvoy, "'In Places Men Reject': Chinese Fishermen at San Diego, 1870–1893." *Journal of San Diego History* 23, no. 4 (Fall 1977): <http://www.sandiegohistory.org/journal/77fall/chinese.htm>. See also Judy Berryman, "Chinese Abalone Fishermen on San Clemente Island," *Mains'l Haul: A Journal of Pacific Maritime History* 35, nos. 2–3 (1999): 22–27.

25 The law also applied to the few Japanese fishermen. Donald Estes, "'Silver Petals Falling': Japanese Pioneers in the San Diego Fishery." Japanese American Historical Society of San Diego: <http://jahssd.org/silver-petals-falling/>.

actually part of a larger state and federal effort to chase the Chinese from the lucrative West Coast fisheries.²⁶

Even when seemingly complimentary toward Chinese fishermen, contemporary white observers could be condescending. Noting the skill with which Chinese shrimpers worked their craft, ichthyologist David Starr Jordan (later president of Stanford University) stated, “the Chinese takes risks in stormy weather which no white man would dream of taking.”²⁷ The implication, clearly, was that Chinese fishermen placed a lower value on human life than did their white-skinned counterparts. Where formal discrimination failed, popular prejudice did not. As one observer quipped: “No Chinamen are allowed to participate in it (the salmon fishery). There is no law regulating the matter, but opinion is so strong in relation to it, and there is such a prejudice against the Chinamen, that any attempt on their part to engage in salmon fishing would meet with a summary and probably fatal reaction.”²⁸ No less a figure than Rudyard Kipling described Chinese cannery workers as “yellow devils” with “yellow, crooked fingers” and another stated unequivocally that any Chinese caught fishing in the Columbia “would be killed on sight.”²⁹ Jordan described Chinese cannery workers as subhuman: “no other race of people could work at such low rates and upon such terms,” and cannery operators who sought to maximize their profits through automation further dehumanized their workers when they introduced the fish-butcher device known as the “Iron Chink.”³⁰

Soon, such racism forced the Chinese to abandon the trade, although it was by no means an overnight change: well into the 1890s, as much as one-third of all California fishermen were Chinese, and it should be noted that this group was instrumental in discovering and developing many of California’s fishing grounds and helping establish the commercial fishery on the Pacific coast.³¹ While the Chinese were a notable segment of the historic California fishing industry, their activities were almost exclusively for the Chinese community, either here or abroad, and they never figured prominently in the market fishery. That sphere was dominated by Italian, Portuguese, and other Mediterranean fishermen.

These relative newcomers also made important advancements. First, they introduced a new vessel, the felucca, to the region. Double-ended, lateen-rigged, and festooned with colorful names, the craft were manned by men called to the sea, fishermen to the core. The earliest Italian fishermen were Genoese, though soon outnumbered by Sicilians who began

26 The McCreary Act of 1893 defined fishermen as laborers, who could thus be denied entrance to the United States under the previous year’s Chinese Exclusion Act. Arthur F. McEvoy, *The Fisherman’s Problem: Ecology and Law in California’s Fisheries, 1850–1980* (Cambridge: Cambridge University Press, 1986), 113–14.

27 David Starr Jordan, “The Fisheries of California,” *Northwest Magazine* 20, no. 119 (November 1892): 469–78.

28 George Brown Goode and Joseph W. Collins, *The Fisheries and Fishery Industries of the United States, Section 4: The Fishermen of the United States* (Washington DC: GPO, 1887), 37–42.

29 Rudyard Kipling, *From Sea to Sea: Letters of Travel*, vol. 2 (New York: Doubleday & McClure Company, 1899), 34–35.

30 Chris Friday, *Organizing Asian American Labor: The Pacific Coast Canned Salmon Industry, 1870–1942* (Philadelphia: Temple University Press, 1994), 84–85.

31 Robert F. Walsh, “Chinese and the Fisheries in California,” *California Illustrated Magazine* 4 (November 1893): 834.

settling in the region in droves in the 1870s.³² An 1880 census survey found that 92 percent of San Francisco's commercial fishermen were foreigners, with the majority hailing from Sicily. A correspondent for one of the local dailies described them:

The number of men employed in catching fish for home consumption and export is from 500–600, about half of whom are Italians and the rest Americans, Slavs, Greeks and Portuguese. . . . The Americans are mostly engaged in salmon fishing at Rio Vista and above, while on the Sacramento and its tributaries and sloughs below it is entirely in the hands of Italians. Of the total number, there are distributed in the fisheries the following: salmon 200 men with 80 boats, bay fishing 250 with 80; coast and inland, 60 with 15. There are also a score of boats distributed at various points along the coast, where neighboring towns or communication with the interior offer reward to the fisherman's industry.³³

The crews were also foreign, speaking in native tongues or some dialect unintelligible to Americans; from their shacks on Telegraph Hill or on their workboats, they sang lusty arias from Italian operas—one apocryphal tale suggests that when the opera troupe from *Il Trovatore* went on strike, the producers simply strolled down to the wharf and rounded up forty fishermen, and that no rehearsals were necessary for that evening's performance.³⁴

The so-called smacks were traditionally green or white, with sails and cordage a rich chocolate brown. In addition to cutting down on the blinding glare, the tanning of sails, nets, and cordage protected them from mildew and rot. The docks around the wharf were a veritable beehive of activity, with fishermen tending their nets (soaking them in vats of hot liquid, for example) and others making necessary repairs to their craft or loading bait.³⁵ By 1885, steam engines began appearing in the fleet, and by 1912, a modified felucca, powered by Hicks or Atlas gasoline engines and known as the "Monterey clipper," was the favorite vessel of San Francisco fishermen. A correspondent for the *San Francisco Chronicle* gave a rich impression of the fleet as it existed in 1885:

There are somewhere about 150 fishing smacks in San Francisco Bay . . . about 70 of these are suited for fishing either inside the bay or outside the heads . . . 60 are small boats used exclusively in crab fishing. . . . The larger boats have crews of 3–5 and are employed exclusively in the rockcod fisheries outside the bay and some of these go to the Farallones. . . . There are also three large steam trawlers now, which devote themselves to deepwater fishing, the property of an incorporated company. . . . The fishing grounds are extensive: inside the bay off Alcatraz, Angel Island, Lime Point, Goat Island and Hunter's Point there are reefs where rockcod fishing is good at almost any season, and in summer a string of fishing boats may be seen almost any day extending from shore to shore across the

32 The earlier generations often operated out of waters closer to the gold fields. Among the most popular sites were Martinez and Pittsburgh, close to their boats moored in Alhambra Creek or Portuguese Flats. By 1882, the *Contra Costa Gazette* counted 250 fishing craft in the vicinity, and a trio of canneries grew up in Benicia and Martinez to process the catch.

33 "Fishing and Fishermen," *Daily Alta California*, May 10, 1872.

34 *San Francisco Progress*, August 3, 1974.

35 Deanna P. Gumina, "The Fishermen of San Francisco Bay: The Men of 'Italy Harbor,'" *Pacific Historian* (Spring 1976): 8–21.

bay. . . . A felucca rigged boat costs about \$500 and her nets and rigging from \$500 to \$1000 more . . . without considering the trawlers, then, there is \$100,000 to \$150,000 invested in the San Francisco fleet. Adding the trawlers to this fleet brings the total to \$200,000 minimum.³⁶

What commodities were these fishermen pursuing? Shellfish, long present in great numbers and the source of native diets for centuries, provide another subfield of California's maritime history. With the influx of people to the region in the mid-nineteenth century, local stands were nearly exhausted. Shellfish were one of the most accessible and vital of all tidal resources in the Bay, and hungry Argonauts were quick to scoop them up. Edwin Bryant, reporting on the eve of the discovery of gold, reported finding fossilized oyster shells "of eight inches in length and of corresponding breadth and thickness."³⁷ One journalist described the scene in the wake of the gold rush: "The mud flats up in Happy Valley present an interesting view at low tide. . . . About a thousand more or less of the great unwashed tribe of this city are there busily engaged in gathering crabs and clams on which the city epicures may feast. . . . It is an interesting occupation, and the followers of it are usually up to their knees in the delicately scented mud that abounds in the classic vicinity of Rincon Point."³⁸

From this unorganized activity came a more concerted effort. When the easy-to-reach mollusks were depleted, other sources needed to be found, requiring boats, labor, and capital. Whereas feluccas were used primarily outside the Golden Gate, fishermen within the Bay preferred the smaller "San Francisco Bay Plunger." Ranging from 15 to 18 feet long, they were well suited for crab fishing and allowed for nimble maneuvering along the meandering rocky coastline. Although there were native oysters in the tidelands on the west side of the Bay, it was not until after Atlantic coast oysters were imported and planted there that business developed of taking them on a large scale.³⁹ Several groups emerged in this field after 1870, finally consolidating into the Morgan Oyster Company, formed in 1887 by Captain John Stillwell Morgan and four partners. In the half century between 1870 and 1920, oystering represented the state's most valuable fishery as commercial oyster growers fenced large areas of San Francisco Bay and constructed a series of raised oyster houses amid the fenced beds wherein oysters were processed and watchmen were housed to dissuade thieves. (Oysters were but one species purposely introduced: in 1879, shad were introduced into the Sacramento River in 1871, and in 1879, striped bass from New Jersey's Nevesink River were introduced into the Carquinez Strait.) The year 1888 marked high water for oyster operations in the Bay, which netted \$1.25 million in profits. In the period between 1888 and 1904, oystermen averaged \$500,000, earning more than any California fishery save whaling. By that time,

36 "Fishermen of San Francisco," *San Francisco Chronicle*, February 16, 1886.

37 Quoted in Joshua Paddison, ed., *A World Transformed: Firsthand Accounts of California before the Gold Rush* (Berkeley: Heyday Books, 1999), 284.

38 *Daily Alta California*, April 13, 1851.

39 This touched off a series of bio-invasions in the bay. While the first documented case of a marine invasive species had occurred in the 1850s in Oakland (Chilean sand fleas brought in as part of ballast) the influx associated with oystering was dramatic. With a new species introduced on average every fourteen weeks, San Francisco Bay is the most heavily invaded estuary in the world, with nonnative species comprising over 90 percent of the biomass today.

environmental destruction had caused the business to be less profitable than anticipated, and established “camps” were abandoned or sold for other uses.⁴⁰

The prime fishing grounds were located off Ocean Beach, past the Golden Gate in the open Pacific. More intrepid fishermen might make their way to the region between Pigeon Point and Monterey, harvesting waters that ranged from fifteen to sixty fathoms deep. The rough waters required skill to keep the boats off the rocks, strength to row when the winds died down, and daring to bring the skiffs in over the bar when the surf was breaking. One contemporary expressed amazement at the fishermen’s audacity: “I have seen them coming in over the inner bar, when it was breaking heavily, and the little craft would seem to stand perpendicular, now on the sternpost and now on the stem.”⁴¹ While the fleet was established with the gold rush and expanded in the 1870s, its prime—at least from the fisherman’s point of view—was during the 1930s, with some 500 boats in the fleet, including about 300 crabbers. The remainder was composed mostly of purse seiners, large enough for a crew ranging from six to sixteen, referred to as the “sardine navy.” Sardine fishing, likewise, was a short-lived phenomenon. It started in San Francisco Bay during World War I, reached great proportions in the interwar period, then declined precipitously after 1944. By as late as 1948, there were over 100 purse seiners employed in the trade, taking as much as 12,000 tons of sardines in any twenty-four-hour period.⁴² At the height of the sardine fishery, commercial vessels engaged in this occupation numbered 466, with an additional 257 operating out of Sacramento. While this number was large, it reflects only one-third of the nearly 2,500 California fishing boats then in operation.⁴³ Some 40 canneries processed the catch between the two world wars, until the local stock was exhausted. By the 1940s, with soldiers and statesmen from around the world descending on the region, the wharf gained an international reputation. By 1960, there was still a flourishing commercial fleet of over 280 vessels, but rising costs, decrepit amenities and, most notably, declining stocks, spelled the end of an era.⁴⁴ By the mid-1970s, fewer than 40 boats remained in San Francisco, which former fisherman Frank Taormina called “the worst commercial fishing port on the Pacific Coast.”⁴⁵

The reasons for the decline of San Francisco’s fishing fleet are many and varied. Lack of attention to amenities (while other ports provided hot showers, laundry facilities, and rest areas, Fisherman’s Wharf had but two rusty and battered portable toilets); unprotected anchorages (tidal surges routinely damaged the craft—an Army Corps of Engineers break-water that provided a haven for 350 berths was deemed overly costly at \$9 million, but was completed in the 1980s); and deteriorated conditions (no security guards, scarce dockside

40 Matthew Booker, “Oyster Growers and Oyster Pirates in San Francisco Bay,” *Pacific Historical Review* 75, no. 1 (2006): 63–88. Mark Twain equated the theft of oysters with a criminal activity, on par with massacre, rape, and the firebombing of churches. Most of the oyster beds were located in the south Bay. Upon their decline, many of the abandoned facilities were converted to saltworks. The first salt ponds had been established in San Francisco Bay in 1854, and there were eighteen in operation by 1868.

41 Gumina, “Fishermen of San Francisco Bay,” 11.

42 John Haskell Kemble, *San Francisco Bay: A Pictorial Maritime History* (New York: Cornell Maritime Press, 1957), 105.

43 An additional enterprise centered around salt makers, who trapped the saline of the bay and marketed it to canneries. In 1868, eighteen salt companies employed 150 workers, producing 10,000 tons of salt garnering about \$80,000 in the process.

44 John S. Bolles and Ernest Born, *A Plan for Fisherman’s Wharf: Comprising the Fisherman’s Wharf-Aquatic Park Area* (San Francisco: San Francisco Port Authority, 1961).

45 *Wall Street Journal*, August 7, 1974.

water and power sources, a declining number of local equipment purveyors) all combined to work against the existence of a viable commercial fleet. Perhaps most vexing, however, was the reality of the fisherman's situation. Years of overfishing and exploitation of natural resources, made possible by new technologies and ancient greed, drastically reduced the available stocks of salmon, crab, sardines, and other mainstays of the San Francisco fishery. A limited market fishery that specializes in rockfish, salmon, and crab is still based at Fisherman's Wharf, but today, there is just one commercial herring fishery at work in San Francisco, though it too has been in steep decline in recent years. Still, the existence of the herring fishery is a testament to both the resiliency of the Bay and to the connections the very first commercial fisheries established some 150 years ago.⁴⁶

While the fleet could no longer rival its former prominence, there remains in the region a strong ethnic flavor and countless seafood restaurants. At first, fishermen operating out of San Francisco sold their catch directly to consumers from their boats. Occasionally, they strolled through the surrounding neighborhoods, selling fish to housewives and local establishments. Some of these, such as one opened by Tomaso Castagnola in 1914, catered mainly to the fishermen themselves. Before the 1920s, the descendants of early fishing families lined the wharf with huge iron pots, offering boiled crabs to passersby. By the 1920s, restaurants began replacing the iron-pot stands. Nunzio Alioto founded his eponymous establishment in 1925, and ten years later Mike Giraldi opened his "Little Fisherman."⁴⁷ Intrepid entrepreneurs operating out of the wharf continue to take sport-fishermen out in pursuit of halibut, sturgeon, striped bass, and assorted other commodities. Today, these and similar establishments—and day-trippers who take tourists out for short portages to the Golden Gate—are virtually all that remain of the once-extensive San Francisco fishing community.

In addition to a strong fishing industry, there was a long-established whaling presence in California. Whalers provided another avenue of egress for Americans into California, adding to the small numbers of fur trappers and hide-and-tallow merchants who called at California ports before the gold rush. According to historian David Iglar, who compiled an exhaustive database of every known vessel that entered California waters between 1786 and 1848, 26 percent of the 953 vessels that called at Alta California ports were engaged in whaling.⁴⁸ In the fall of each year, whalers from throughout the North Pacific descended on the region to refill their water casks and repair their vessels; they were summarily set upon by ravenous merchants eager to separate the whalemen from their pay. Until the first use of petroleum as an illuminant in 1869—an event that had major maritime implications for San Francisco and California—whaling provided the main source of incandescent oil. A variety of other products, including ambergris (used in perfumes), whale meat (including the tongue, which was considered a delicacy among European nobles), bone (used for decorative scrimshaw and in other applica-

46 In addition to commercial fisheries, the Bay provided outlets for recreational and subsistence activities, as well. Interesting information about such activities can be found in "Recollections of an Old Timer," *South of Market Journal*, June 1926, and "The Tar Flat Boys Direct a Stranger to Long Bridge: A Reminiscence by James H. Roxburgh of San Francisco's Waterfront," *South of Market Journal*, August 1933.

47 Nunzio's son, Frank, later drove a Cadillac festooned with a gold crab as hood ornament. *San Francisco Examiner*, June 26, 1975.

48 David Iglar, "Diseased Goods: Global Exchanges in the Eastern Pacific Basin, 1770–1850," *American Historical Review* 109, no. 3 (June 2004): 693–719.

tions), and baleen (the plastic of its day, used for everything from corsets to buggy whips and carriage springs), made whaling a highly profitable, if often deadly (for men and whales alike), endeavor. Originally, whalers operated out of New England ports, with New Bedford and Nantucket being the most pronounced, but as Atlantic stocks depleted, it was recognized that entrée into the Pacific was necessary to continue making money. The British whaler *Emelia* was the first to enter the region, calling at South Pacific ports in 1787. She was followed closely by others; in 1791, seven American whalers called at Valparaíso, Chile. These early American whalers frequented the Sandwich Islands, preferring the ports of Honolulu and Lahaina, where captains rendezvoused to acquire provisions, filled out their complement of sailors with knowledgeable and reliable *kanaka*, and avoided the imperial proscriptions that made California unattractive.⁴⁹

Whalers were first seen in California waters by the 1820s (the first to call at San Francisco was the British ship *Orion*, which deposited William Richardson in that city.)⁵⁰ On October 12, 1823, a small fleet of four American whalers from New England ports—*Alert* (139 tons, Charles Ray, master); *Gideon* (204 tons, Obed Clark, master); *Ploughboy* (391 tons, William Chadwick, master); and *Almira* (362 tons, Timothy Daggett, master)—made their way through the Golden Gate in search of fresh wood and potable water. Finding the wells in Yerba Buena inaccessible and the springs on Angel Island dry, they made their way to a protected anchorage in Sausalito (Richardson's Bay). News spread rapidly that San Francisco Bay had accommodations for all whalers and trade regulations far less strident than those found in Sausalito. By 1836, the cove was known the world over and illicit trade only served to rankle colonial officials.⁵¹

The presence of bowhead whales, first taken in 1843, led to major American incursion into the region, and an increased presence in San Francisco. Indeed, of more than seventy American ports involved in whaling, only three—Nantucket, New Bedford, and Provincetown—outfitted more whalers than San Francisco. By 1846, the same year that American pioneers raised the Bear Flag over Sonoma, nearly three hundred whalers headed for the North Pacific. The rush of whalemens to the North Pacific made Americans familiar with this coast, and in the course of years, many of their ships came to San Francisco to get fresh water and provisions.⁵² By the mid-1840s, when whalers composed 45 percent of the US merchant fleet, William Heath Davis reported that there were “as many as thirty or forty whalers were in the bay (San Francisco) at any one time. . . . They generally had on board a few thousand dollars' worth of goods for trading, and were allowed by the customhouse authorities to exchange goods for supplies for their own use, at any point they touched along the coast, to the extent of \$4000 but they were not allowed to sell any goods for cash.”⁵³ In their letters home, sailors wrote in glowing terms of the grand bay, which was undoubtedly well adapted by its position and circumstances,

49 See Eric Jay Dolan, *Leviathan: A History of Whaling in America* (New York: W. W. Norton and Company, 2007).

50 See Lloyd C. M. Hare, *Salted Tories: The Story of the Whaling Fleets of San Francisco* (Mystic, CT: Mystic Seaport Press, 1960).

51 Richard William Crawford, “Whalers from the Golden Gate: A History of the San Francisco Whaling Industry, 1822–1908” (master's thesis, San Diego State University, 1981).

52 During his hydrographic survey in 1826, Captain Frederick Beechey of HMS *Blossom* counted seven American whalers at Richardson Bay (Sausalito) alone, taking on freshwater and firewood.

53 Cited in Andrew Rolle, *An American in California: The Biography of William Heath Davis, 1822–1909* (San Marino, CA: Huntington Library, 1956).

to become the chief American seaport on the Pacific. Thomas Larkin of Monterey, for example, in an advertisement he ran in a New Bedford periodical, gushed about “El Puerto de los Balleneros” (the port of whalers):

There are sufficient buildings for storage and . . . the interior of the country has every facility of supplying whalers with refreshment immediately upon arrival. This port offers many inducements to visit. . . . In the months from September to December they are in general sure to find vegetables here, and can find no better port in the Pacific as far as regards health. Although California is now one of the Mexican Departments, and duly bound to follow the laws of Mexico, yet such is not always the case. Laws are often made here to suit the place and the times, even to annulling parts of the Mexican Tariff.⁵⁴

In May, he wrote to Moses Yale Beach of the *New York Sun*, pointing out that “in two or three years there will be 2000 American seamen fishing within ten or fifteen days sail of this country. This is sufficient to point out the advantages presented in the Port of San Francisco. . . . The harbor and its bays will hold perhaps all the vessels in the world.”⁵⁵

As Spanish suzerainty gave way to Mexican authority, San Francisco, with its deep-water access, became a preferred destination of whalers, who contributed to fix the determination of the American government to acquire the bay and its vicinity. While captains eschewed that port during the height of the gold rush (few wanted to expose their crews to the temptations of the Sierras), it became the center of the American whale fishery by the onset of the Civil War. By 1857, ten vessels operated out of San Francisco, and in the following year, the Pacific Oil and Camphene Works was established in that city to process spermaceti and sperm oil.⁵⁶

While San Francisco was the premier whaling port in the American Pacific during this period, it was by no means the only one. A shore whaling station was in operation at Monterey by 1851, joined a few years later by a Portuguese firm that eventually merged with its American predecessor.⁵⁷ Moderately successful, but short-lived stations were likewise established at more than a dozen points along the California coast: at Crescent City, Carmel, Half Moon Bay, Santa Cruz, Davidson, Pigeon Point, Pillar Point, and other communities. At San Diego, a whaling station came into being as early as 1856. The principal prey of these whalers was the California gray whale, which skirted the coastline in its annual migration from the Sea of Cortés to the Pacific Northwest.⁵⁸ Over the years, a number of companies engaged in that business there, but those of Tilton, Johnson & Company, and Packard & Company were the most conspicuous. Operating at Ballast Point at the entrance to San Diego Harbor, they each produced nearly 1,000 barrels of oil—at \$10 per barrel on the open market—by the time of the American Civil War.⁵⁹ While the profit

54 Harlan Hague and David J. Langum, *Thomas O. Larkin: A Life of Patriotism and Profit in Old California* (Norman: University of Oklahoma Press, 1990).

55 Boyd Huff, *El Puerto de Los Balleneros: Annals of the Sausalito Whaling Anchorage* (Los Angeles: Glen Dawson, 1957).

56 Other local refineries included the California Oil Works and the New Bedford Oil and Camphene Works.

57 That same year the whaling bark *Russell*, out of New Bedford, was the first to receive registry at San Francisco.

58 Breeding grounds off Baja California had been discovered by Charles Scammon in 1857.

59 The average gray whale produced somewhere in the neighborhood of 35–40 barrels of oil.

could be considerable, the costs were extreme: estimates of the numbers of targeted whale lost ranged from 20–33 percent, an attrition rate hard to reconcile with the investment in time and resources required of a whaling voyage. With the inevitable decrease in the gray whale populations, the shore whaling stations fell into serious decline; by 1900, only the one at Monterey remained in operation.⁶⁰

While shore whaling decreased, steam technology opened access to new hunting grounds. By 1867, the year America acquired Russian Alaska, 77 whalers produced over 50,000 barrels of oil and more than 800,000 pounds of bone from whales taken in Arctic waters.⁶¹ In 1883, the Pacific Steam Whaling Company was formed to bring together previously competing groups, and the next year, the Arctic Oil Works was established in Portero to refine, transport, and trade in whale oil. The Pacific Steam Whaling Company introduced the use of steam whaling barks, a vessel that became the hallmark of the San Francisco whalefishery. Between 1884 and 1894, over 40 active whalers called the City by the Bay home, and from 1885 until 1905, San Francisco was the principal whaling port in the world, with its wooden steamers bringing profitable cargoes of oil and whalebone, which were transported to customers via the transcontinental railroad that offered a cheap means of carrying refined oil to the markets of the industrial East and Midwest. With the transfer of the center of American whaling to the Pacific coast, many New England boatbuilders transferred their operations to California.⁶² The New Bedford firm of J. C. Beetle, for example, opened a yard in Alameda, building whaleboats.

Repairs were not all one could get in San Francisco. Beginning in 1882, the firm of Dickie Brothers was producing steam whaleships, including its first version, the 533-ton auxiliary steamer *Bowhead*, turned out for Charles Goodall. Beginning in 1889, a number of San Francisco–based whaleships wintered at Herschel Island, spending several months there each year.⁶³ But there were serious challenges to the American whalefishery by this time. The depredations of the Confederate commerce raider *Shenandoah* severely injured the fleet, with as many as forty vessels captured or lost to that ship and its commander, James Waddell. Those fortunate enough to escape his attacks were still threatened by conditions over which they had little control. Each year, shifting ice floes threatened to crush vulnerable ships in the Arctic waters; in the winter of 1871–1872, over thirty vessels were lost in such conditions, further weakening what had once been a robust fleet. By 1908,

60 The industry enjoyed a brief resurgence in the years after World War II, when a whaling station opened at Point San Pablo in 1947. The last active station in the United States, it closed only when the anti-whaling treaty was ratified in 1972. For a look at whaling in Southern California, consult F. Ross Holland, Jr. "Shore Whaling on the California Coast," in *They Came from the Sea: A Maritime History of San Diego*, ed. Carl F. Reupers (San Diego: Cabrillo Historical Association, 1979). See also Ronald V. May, "Dog-Holes, Bomb-Lances, and Devil-Fish: Boom Times for the San Diego Whaling Industry," *Journal of San Diego History* 32, no. 2 (1986): <https://www.sandiegohistory.org/journal/86spring/dogholes.htm>; Richard Crawford, "The Whalers of San Diego Bay," *Mains'l Haul: A Journal of Pacific Maritime History* 19 (1983): 3; and Thomas Leo Nichols, "California Shore Whaling, 1850–1900" (master's thesis, CSU Northridge, 1983).

61 John Bockstoe, *Steam Whaling in the Western Arctic* (New Bedford: Old Dartmouth Historical Society, 1977). See also James W. Vanstone, "Commercial Whaling in the Arctic Ocean," *Pacific Northwest Quarterly* 49, no. 1 (January 1958): 1–10.

62 Robert Lloyd Webb, "Power Whaling: Industrial Shore Whaling on the West Coast, 1905–1972," *Mains'l Haul: A Journal of Pacific Maritime History* 37, no. 1 (2001): 30–46.

63 See David Hull and Michael Dobrin, "Herschel Island: San Francisco's Outpost on a Lonely Arctic Coast," *Mains'l Haul: A Journal of Pacific Maritime History* 40, no. 1 (2004): 44–56. See also R. R. Leet, "American Whalers in the Western Arctic, 1879–1914" (master's thesis, San Francisco State University, 1974).

the price of whalebone collapsed, the increased production of natural gas and petroleum made whale oil less desirable, and the last of the Pacific Steam Whaling Company vessels was laid up in 1910.

William Shorey

Born in Barbados in 1859, William Thomas Shorey was apprenticed by his West Indian mother and Scottish father to a career as a plumber. Not liking this trade, the young Shorey shipped out on a Boston-based merchant ship and quickly took a liking to the sea. Arriving in New England, he shipped out on a whaler, embarking on a global journey that would ultimately deposit him in San Francisco. Along the way, he rose through the ranks of the ship, advancing from greenhand to first mate as a result of his hard work and physical prowess.

Shorey sailed out of San Francisco for the next quarter century, eventually attaining the rank of master on a number of notable West Coast whaleships. As San Francisco became the center of the American whalefishery, Shorey's voyages took him from the Sea of Japan to the Arctic Circle and from the Hawaiian Islands to Mexico and the Sea of Okhotsk. As the only person of color in command of a San Francisco-based vessel, he attained a level of respect unheard of in Jim Crow America and unrivalled in Victorian-era California. His reputation as a skilled and fearless captain was clouded, though, by his violent temper and participation in the shady labor market of the day. Brought up on charges of cruelty to seamen, he was pilloried in the press but acquitted of all charges, even though the complainants were whites and Shorey was not.

Shorey married into a prominent San Francisco family and raised five children in his West Oakland residence. Deeply involved in the wider community, he held leadership positions in a number of denominational and secular organizations. He retired from the sea in 1907, but maintained his license until his death from pneumonia in 1919. The career of William Thomas Shorey is at once remarkable and emblematic: the struggles he faced as a person of color, the brutal conditions of the American whalefishery, and the role of maritime San Francisco in this epic saga are all on display in his brilliant rise from plumber's apprentice to "Black Ahab of the Bay."



Images courtesy
Oakland Public
Library and
National Park
Service.

Just as fishing provided opportunities for immigrants and those on the margins of American society, whaling also offered an avenue to respectability. As seen in the works of Jeffrey Bolster, James Farr, and others, the American whalefishery was disproportionately composed of African Americans.⁶⁴ This is as true of the San Francisco iteration of whaling as it was of its earlier incarnations. The tale of William Shorey is particularly illustrative. Born in the Caribbean, he rose through the ranks of the whalefishery to become master of several American whalers, proving that the racial boundaries then extant in Jim Crow America were largely confined to terrestrial domains. His career spanned several decades and showed the fluid nature of maritime San Francisco and the mutability of race at sea. While the story might be unique, it is indicative of the opportunities and challenges presented by the fishing and whaling industries, providing an important window into the maritime milieu of California during the latter years of the nineteenth century.⁶⁵ Issues of race and class in maritime California will be covered more fully in following chapters.

64 W. Jeffrey Bolster, "'To Feel Like a Man': Black Seamen in the Northern States, 1800–1860," *Journal of American History* 76 (1990): 1173–200; and James Farr, "Slow Boat to Nowhere: Multi-racial Crews of the American Whaling Industry," *Journal of Negro History* 68, no. 2 (Spring 1983): 159–70.

65 On Shorey, see Timothy G. Lynch. "'Black Ahab': William Shorey and the San Francisco Whalefishery," in *Perspectives on Race, Class and Gender in Maritime America*, ed. Glenn Gordinier (Mystic, CT: Mystic Seaport Press, 2008). See also Daphne Lagios, "Bold Lines Connect: The Shoreys, a Unique Maritime Family," *Mains'l Haul: A Journal of Pacific Maritime History* 34, no. 1 (1998): 28–35.

A traditional Chinese junk, Quock See Wo, was built at Hunters Point in 1906 and licensed for the shrimp trade from February 28 of that year to February 9, 1916.



Courtesy San Francisco Maritime National Historical Park. B07.10526pl.

This image shows feluccas off Sausalito, ca. 1900. Straight-bowed double-enders, they were lateen rigged and retained many of the features of their Mediterranean forebears. Ideal for conditions inside the Golden Gate, they were used to catch herring, salmon, crab, and shrimp. By the turn of the century, they were outfitted with one-cylinder gas engines and could venture outside the Gate. By the 1920s, the sails had been abandoned altogether, the boat further modified by the addition of a high-rising "Monterey clipper bow" to keep the vessel dry in the rough waters outside the Gate.



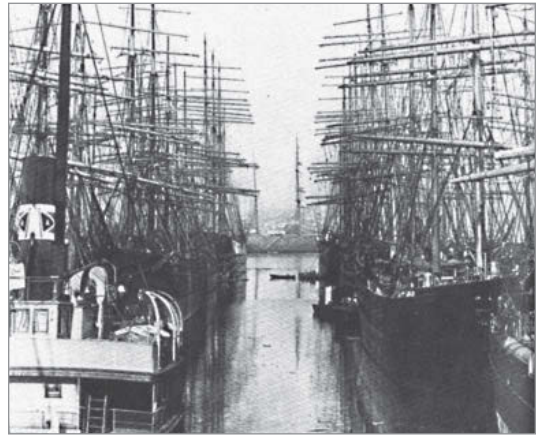
Courtesy San Francisco Maritime National Historical Park. P. Borman collection. B11.24, 153.

Perilous conditions awaited fishermen who ventured to Alaska, as this image shows.



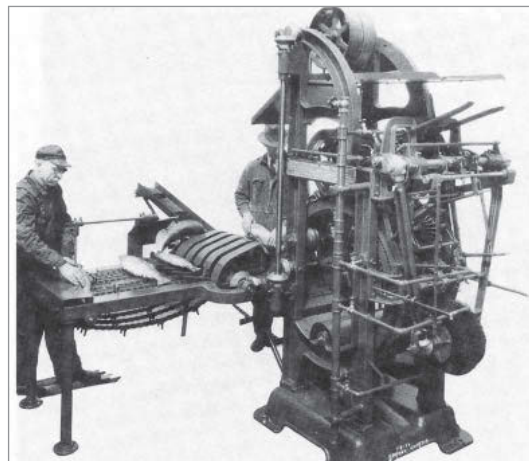
Courtesy San Francisco Maritime National
Historical Park. G11.3842.

The Alaska Packers fleet wintering in Alameda.

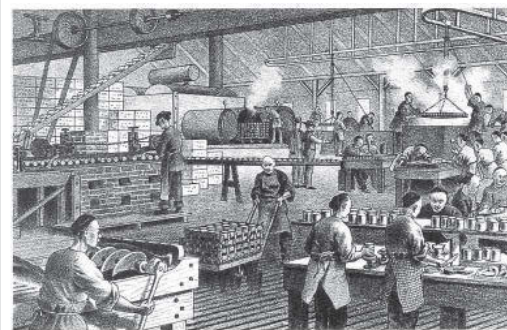


Courtesy San Francisco Maritime National
Historical Park. B11.21, 925 psl.

The fishing industry was quickly mechanized to process greater quantities at lower cost. At left, a fish ladder is used to expeditiously move the catch from ship to cannery. Below, a hand-operated cutting machine and the insensitively named “Iron Chink” at work and a mechanized cannery operation at Astoria, Oregon.



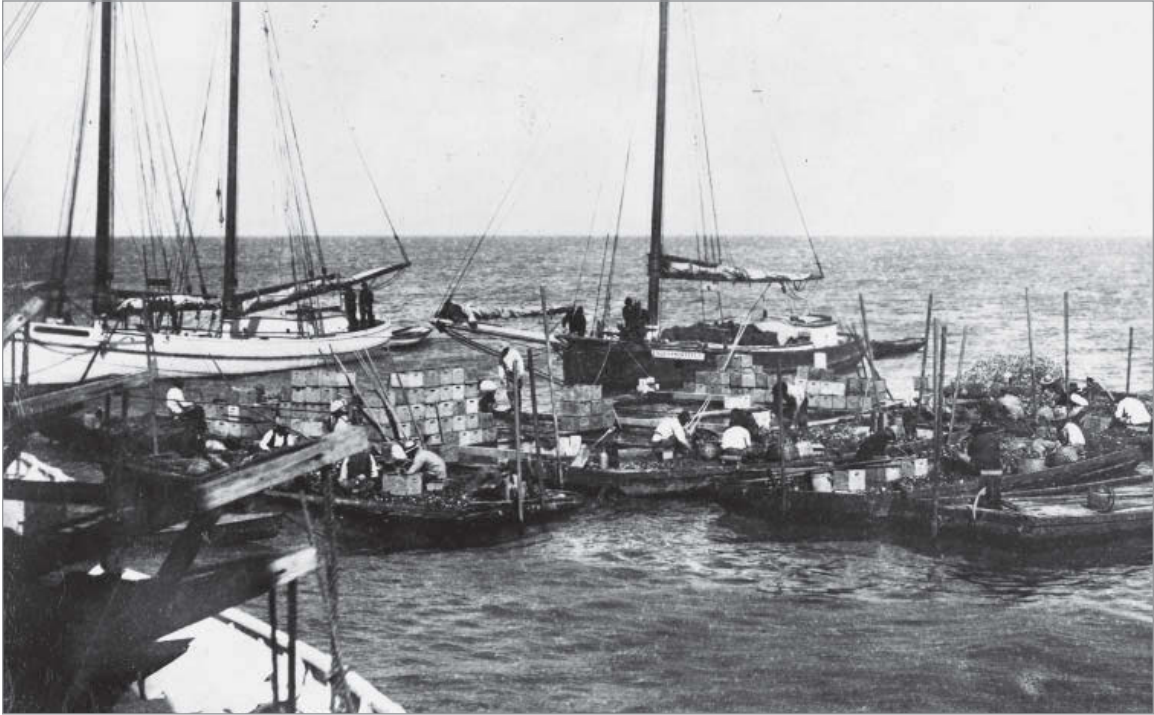
The “Iron Chink” of the late 1910s slowly made its way into the canneries despite the claims of its manufacturer that it replaced many workers (Curtis Photo, Special Collections, University of Washington, negative no. 58156)



At Astoria, Oregon, in the mid-1880s, Chinese worked at every stage of the canning process (West Shore, June 1887, Special Collections, University of Washington, negative no. 14788)

Courtesy San Francisco Maritime National Historical Park. G11.21318.

Undated view of vessels of the Morgan Oyster Company, Redwood City, California, at the packing-house pier.



Courtesy San Francisco Maritime National Historical Park. B12 .489nl.

Undated view of the two-masted schooner *President*, built in 1891, at rest in the San Francisco oyster beds.



Courtesy San Francisco Maritime National Historical Park. B6 .487n.

CHAPTER 8

MARITIME ACTIVITIES ON BAY AND INLAND WATERS

While fishing might be the most obvious manifestation of maritime activities that occurred within the confines of San Francisco Bay, it was clearly not the only—nor even the primary—such activity. Cargoes as diverse as hay, bricks, lumber, and assorted goods—not to mention a large number of people—routinely transited the Bay, from smaller landings like Alviso and San Leandro, to Petaluma and all points between. Before completion of the bridges and highways that currently crisscross the region, the quickest, safest, cheapest, and most reliable means of moving goods and people was by water. This chapter looks at the use of ferries and schooners in the evolution of maritime San Francisco.

Until the gold rush, there was little need for any ferry or schooner service. The small number of passengers seeking transportation, coupled with the limited number of goods or supplies needed to sustain the community at Yerba Buena, meant few were inclined to participate in the business. California's inland commerce was carried on by means of launches, or sloops and schooners of fifteen and twenty tons burthen, used chiefly for hide-droghing purposes. The coast trade was confined to a half-dozen brigs and schooners, running between San Francisco and the Columbia River, or the southern ports of Santa Cruz, Monterey, and San Pedro, and a Mexican port or two. Soon, however, the growth of the regions' population and the need to sustain it created a need for a workboat designed to carry bulk goods and produce on the waters of the Bay and its tributaries. The ubiquitous scow schooner, an interesting local vessel, filled this niche.

Scow schooners were extremely useful craft, carrying a variety of cargoes during their decades of prominence. A shallow draft made it possible for scow schooners to load grain, hay, and farm products in creeks and sloughs that other craft could not penetrate, thereby integrating comparatively isolated regions of the Bay with the city of San Francisco. While sailing scows were not original to San Francisco, those found on the Bay—notably center-board scow schooners—appear to have developed independently during the middle years of the nineteenth century. A Santa Cruz builder dubbed one of his 1848 creations *Bloody Box*, but no incontrovertible evidence of scow schooners exists until their depiction in a series of photographs from 1860, by which time they were already popular. By the turn of the century, there were between 200 and 400 scow schooners working the bay and rivers, carrying lumber and supplies upriver to agricultural regions, and returning with hay, grain, and farm produce. These were complemented by cargoes of sand (out of the city) and brick (toward San Francisco) that formed a regular, if inglorious, economic system. With no premium on speed, there was little demand for technological improvements, and the same design that was featured in the 1860s remained prominent a half century later.

While the general design of the scow might have remained unchanged, owners quickly realized the advantage of motorized power, and engines made their way into the fleet as soon as they became available. The first motor scow was seen scurrying to and from the city by the time of the epic 1906 earthquake, but by 1920, they had made significant inroads. Of the sixty-four scow schooners still in operation at that date, only a small handful remained powered by wind. But theirs was a fleeting day—with the advent of freeways

and bridges, scow schooners became obsolete as trucks hauled the cargos they once carried. By 1959, only one (*Alma*) remained. Today, she is on display at the San Francisco Maritime Museum's Hyde Street Pier.¹

Scows like *Alma* were built in an unnumbered profusion of places from Yerba Buena to Benicia, though by 1900, most of the construction and repair had long been centered in Hunter's Point at the yards of Hans Anderson, J. S. Nichols, John J. Dirks, H. C. Thompson, Fred Seimer, and Emil Munder. The vessels were cheap to build and operate, easy to load, and required no tow or engine. As such, they could turn a useful profit in no time. Historian Roger Olmsted characterized them as "cheap, strong, and burdensome craft that did the most work for the least cost."² The utilitarian craft were flat-bottomed with a square stern and bow, with lines that translated to steadiness and longevity. The vessels were surprisingly nimble, handling well under various conditions, tacking easily, and easily maneuvering in close quarters, all without sacrificing speed or ease of use. Their names reflected their vitality: at any time on the Bay, one might encounter *Artful Dodger*, *Poor Champion*, *Witch of the Bay*, or *Rough and Ready*. The craft often beat yachts in Master Mariner races (common on the Bay in the 1870s and 1880s), despite being often outclassed (scows ranged from 11 tons for the 37-by-15-foot *Star* to 142 tons for the 89-by-31-foot *Mono*). While many a deepwater sailor scoffed at the scow schooners, referring to them as "big square boxes with sails set," it was the very same salts who most often owned and operated the craft.³ This is not overly surprising, as scow schooners had many advantages over deepwater sail: one could earn better money, avoid the hazards of an open ocean crossing, and enjoy the possibility of something approaching a regular home life.

Alma

The flat-bottomed scow schooner *Alma* is the last remaining example of the 400 or so craft comprising San Francisco's fleet in the latter part of the nineteenth century. Scow schooners were the work-a-day vessels of maritime San Francisco, and while they shared characteristics with many that were in operation throughout the United States (particularly in the Chesapeake Bay), they have virtually disappeared: *Alma* is the last known example still afloat. Her rough-hewn Douglas fir planking carried diverse cargoes but limited her to inland channels. Beached on the Alviso shore in 1957, she was nearly lost and forgotten: strewn amidst rubble and debris, she was fated to be part of the encroaching bay-fill substrate. With a \$500 appropriation from the California State Park System, and a dedicated team of volunteers and ship preservationists, *Alma* was rescued from this fate. Under a full moon on August 17, 1959, she was towed to Oakland by a tug operator whose grandfather had been the scow's first owner. Originally operating as a floating work platform for other museum ships, she was reconditioned and by 1968 had taken her place as a museum ship in her own right.

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- 1 See Anita Mozley, "Scow Schooners of San Francisco Bay," *Sea Letter* 5, no. 1 (December 1967): 1–3. See also Roger R. Olmsted, *Square-Toed Packets: Scow Schooners of San Francisco Bay* (Cupertino: California History Center, 1988).
 - 2 Roger Olmsted, *Scow Schooners of San Francisco Bay, 1849–1949* (master's thesis, University of Nevada, Reno, 1955), 18.
 - 3 Mozley, "Scow Schooners," 2.

Scows like Alma had been built specifically for the local conditions of San Francisco Bay. The standard model sacrificed beauty for utility. Flat bottomed and shallow drafted, scows were easy to maneuver in narrow inlets and sloughs. The heavy centerboard structure allowed for a carrying capacity twice its tonnage. At 59 feet by 22 feet, Alma is fairly typical of her class: her only unusual feature (aside from her still remaining afloat) is that her planking runs laterally as opposed to lengthwise.

Alma was built in 1891 by Fred Siemer, a German immigrant who constructed the vessel in his own Hunter's Point yard. Siemer, like most scow craftsmen, operated without plans, giving each scow its individual quality. Alma was no exception. Named for his granddaughter, it was operated by Siemer's son-in-law, James Peterson. Himself an immigrant (from Sweden), Peterson operated a fleet of a half-dozen scows, eventually growing to represent one of San Francisco's largest and most important such operations.

Alma, like most scows, carried two masts and a small crew consisting of two or three persons. The deckhands were noted for their strength and toughness: competition for dock space and questions over rights-of-way often degenerated into fisticuffs. Even when peaceable, the business was difficult. Operating from spring through fall, the craft plied streams and shallow waterways with tremendous loads of hay, sometimes resorting to poling, kedging, or even rowing the craft upstream. In times of high wind, they often ran afoul of skippers piloting larger craft, as the 1909 collision of Alma with the Alaska Packers Association vessel Kvichak attests. By 1918, Alma had been demasted and converted into a salt-carrying barge; within a decade, she had been converted once again to an oyster shell dredger, hauling over 100 tons of this commodity per week to Petaluma poultry farms, where it was ground up and added to chicken feed.

The use of motor scows, which first appeared on the Bay in 1906, made such incidents as the Kvichak collision less common. By 1925, only four sailing scows remained in active service on the Bay. Alma herself took on an engine just two years later. These early gasoline engines produced no more than 50 horsepower; during her last upgrade in 1951, Alma was outfitted with a pair of diesel engines capable of generating 220 horsepower. Even with these advancements, scows were soon to be replaced. The internal combustion engine, bridge and highway construction, and other variables saw them lose their cargoes to trucks by the middle of the twentieth century. Alma hung on, delivering oyster shells to Petaluma chicken farms, and serving as a shell dredger until 1957, the last of a ubiquitous if unromantic fleet.

Today, Alma sails routinely from San Francisco Maritime National Historical Park's Hyde Street Pier on a fixed schedule, educating tourists and school groups about the maritime heritage and history of San Francisco Bay. She is a National Historic Landmark, having achieved that status in 1988.

Of course, these rewards came with some costs, too. Since the crews did the loading and unloading in addition to sailing the craft, there was comparatively more work—sometimes three or four times as much as on a deepwater vessel. The work could be difficult, as in shallow waters, where the crew poled the craft upriver, or ran a line to a tree and winched up to it. At times the pace was agonizingly slow, but there were also spans of frenetic activity: loading a thousand bales of hay in an afternoon, piled so high that the crafts eventually

adopted raised pulpits so that the helmsman would have an unimpeded view of the bay, was a case in point. The daily hazards of groundings, as the schooners beat to windward up narrow channels, in fickle winter breezes, and frequent fights over rights-of-way (with inevitable collisions) made the job nothing if not nerve-wracking.

Such hazards were not, of course, limited to scow schooners, and plagued all vessels engaged in inland traffic. In 1860, the side-wheeler *Sacramento* approached Steamboat Slough, a narrow tributary of the Delta. *Antelope*, another side-wheeler, piloted by Captain Enos Fouratt, tried to pass, but was unable to do so. It seems *Sacramento* took issue with the bold move of its smaller competitor and forced her aground, leaving her stranded on the mud flats as she herself steamed toward Rio Vista. Fouratt made the necessary adjustments to his vessel, freed her from the extrication, and steamed off in search of revenge. Finding *Sacramento* just past Rio Vista, Fouratt rammed his bow into the offending vessel's starboard quarter. *Sacramento* retaliated by reversing its engines, causing her to lay across *Antelope's* bow, pushing her sideways at full speed several miles downriver. Tempers cooled, and Fouratt—arrested in San Francisco the next day—described the event as merely causing “some slight delay and expense.”⁴

In addition to the veritable flotilla of steamboats and scow schooners that scurried across the waters of the bay and delta, there was an armada of workboats that constituted a significant percentage of all inland shipping in the state.⁵ The aforementioned scows were the most ubiquitous craft, but they were joined by any number of commercial sloops and schooners. These were primarily round-bottomed centerboard vessels with a shallow draft and wide beam. Fast enough to sail against tidal currents, they ran more or less on schedule, a feat not within grasp of the scows. The earliest were plunger (or cat) rigged, but by the 1880s, almost all could be classified as sloops. These hardy craft were used for everything from oyster transports and as tenders to the river salmon fishery to hauling diverse freight such as potatoes (indeed, they were sometimes referred to as “potato boats”) and fresh produce. By the mid-1880s, some were equipped with primitive gas engines, which allowed six knots in calm waters, and a number were engaged in bringing passengers to various Bay attractions on pleasurable day cruises. Trips to the Farallones to hunt sea lions or to isolated picnic grounds were common; regrettably, accidents and fatalities were not uncommon.⁶

The first San Francisco Bay built tugs included *Merrimac* (built at Eden Landing in Alameda County in 1861), *Rescue* (built in San Francisco in 1863), and *Water Witch* (a forty-ton craft commissioned in 1866 for Goodall and Perkins). Meeting sailing ships outside the heads as well as towing them to sea was a major waterfront business in San Francisco for much of its maritime history. Rather than bringing order to the intense and often violent competition that marked the Whitehall boatmen, tug operations merely escalated it, since the expense of owning and operating such craft made securing business more important than ever.

4 See Andrew Cohen, *Gateway to the Inland Coast: The Story of the Carquinez Strait* (Sacramento: California State Lands Commission, 1996).

5 For patterns of bay and river transportation development, see Joseph A. McGowan, *History of the Sacramento Valley* (New York: Lewis, 1961). See also Thor Severson, *Sacramento 1839 to 1874: An Illustrated History from Sutter's Fort to Capital City* (n.p.: California Historical Society, 1973).

6 Stephen Canright, “Commercial Sloop List, Release 14,” August 26, 2009, SFMNHP; and J. A. McGowen, “San Francisco-Sacramento Shipping, 1839–1854” (master's thesis, University of California at Berkeley), 1939.

Tug operations on the Bay were monopolized throughout much of its history. The Goodall and Perkins operation, headed by Captain Millen Griffith, controlled the business until 1883, when the Red Stack/Merchants and Shipowners Tug Company was established to contest the monopoly. The Black Stack/Spreckels Tug Company was established shortly thereafter, and for some years, there was competition between the three. By World War I, Red Stack had risen to prominence, buying out its competitors. Purchased by Tom Crowley in 1918, that company enjoyed an unprecedented—and unbreakable—monopoly on tug service well into the 1970s.

While sloops and scow schooners were needed to transport hay, bricks, coal, produce, and other bulk commodities throughout the greater San Francisco Bay region, ferries were required to bring people from one part of the Bay to another.⁷ There are, in effect, two separate and distinct stages that mark the development of ferry service on the Bay. One purpose was for local excursions. During this stage, the distinction between regularly scheduled service and irregular excursions were often, indeed usually, blurred. The second iteration was with ferries as part of a formal travel and transportation system (the major ferries were those that were connected with a railroad; in 1930, at the peak of Bay ferry service, the Southern Pacific Railroad with forty-three ferries, owned the largest ferry fleet in the world. Some of these had room for nearly 2,000 passengers). This stage of ferry evolution was as a commuter vehicle.

The earliest manifestation of ferry service was seen in the operations of the steamer *Kangaroo*.⁸ Established in 1850 by Captain Thomas Gray, *Kangaroo* charged “excursionists” a fixed rate (\$1 per person, \$3 per wagon or horse) to take “a trip across the bay for an opportunity to visit the wondrously wooded region of Contra Costa”: she was joined shortly thereafter by the side-wheel steamer *Hector*.⁹ Departing from San Antonio Creek on a twice-weekly schedule, it was noted that the sailings were “subject to tide, sand bar, fog and weather.”¹⁰ The following year, a ferry of unknown name began carrying Mare Island workers across Mare Island Strait from Vallejo.¹¹

Apparently, the first regular commuter service was provided by the Charles Minturn’s Contra Costa Steam Navigation Service in 1853. Using the ferry *Clinton*, the operators had three daily runs from San Francisco to Oakland, charging fifty cents per person (alternatively, monthly commuters could purchase a pass for twenty dollars). By 1857, she was joined in transbay service by the ferry *Contra Costa*, built in San Francisco by John G. North.

7 An 1876 inventory counted 462 two-masted, and 11 three-masted schooners owned and operated in San Francisco alone. *Certified List of Vessels and their Tonnage Registered at the San Francisco Custom House* (San Francisco: Towne and Bacon, 1876).

8 The standard treatment on this topic remains George Harlan, *San Francisco Bay Ferryboats* (San Francisco: Howell-North Books, 1967). A nice pictorial history can be found in Paul C. Trimble, *Ferries of San Francisco Bay* (San Francisco: Arcadia Books, 2007).

9 For a firsthand description of ferry construction and operation, see Samuel Ward, *Sam Ward in the Gold Rush*, ed. Carvel Collins (Palo Alto, CA: Stanford University Press, 1949).

10 Trimble, *Ferries of San Francisco Bay*, 18.

11 By 1909, the Vallejo–Mare Island route was controlled by the Vallejo Ferry Company. Enjoying a monopoly, it began to charge exorbitant rates to bring shipyard workers across the narrow channel. Intrepid shipwrights pooled their resources and acquired a small boat. To evade the legally binding monopoly, the workers formed the Solano Aquatic Club, with the stated intent of promoting yachting, sailing, rowing, and hunting. The real intent was to undermine the monopoly. By 1912, the club had its own weekly newsletter—the *Mare Island Tribune*—and used advertising revenue to purchase additional boats, all of which were filled to capacity with members en route to their shipyard jobs or heading home at the conclusion of their shift. The route eventually became known as the Six Minute Ferry Company, until it was brought out in 1922.

Unfortunately for Minturn, a competitor soon appeared in the form of James LaRue's San Antonio Steam Navigation Company. Operating a pair of vessels at rates half that charged by Minturn, the newcomer had quite an advantage, made more obvious following a disastrous race in 1859, when Minturn's *Contra Costa* suffered an explosion, with the loss of six lives, in a climactic battle against LaRue's *Oakland*. The two services eventually overcame their hostility and merged soon thereafter. To accommodate the increase in transbay ferry traffic, the Davis Street Wharf was replaced as the San Francisco terminus, slips were built by the Board of State Harbor Commissioners at the foot of Market Street in 1875, and the Central Pacific Railroad constructed an adjacent passenger station.¹² Predecessor to the Southern Pacific, the Central Pacific facilities allowed for railcars coming from Oakland (and the transcontinental railroad terminus there) to be transferred across the Bay to San Francisco for processing. Before long, that company enjoyed a monopoly and exerted tremendous influence over local and state politics.

Such improvements were not unique to San Francisco. The Oakland Long Wharf, completed in 1871, extended almost two miles into the bay, nearly reaching Yerba Buena Island, and served deepwater and coastwise vessels until 1918. Originally designed as a connection line to the Transcontinental Terminal, it served both passengers and freight until 1882, at which point the former were directed to the larger Oakland Pier Terminal.¹³

Passenger service was not limited to transbay operations. Irregularly scheduled services shuttled Argonauts from San Francisco to the Sierra goldfields, and by 1866, *Capital* linked San Francisco and Sacramento, and a double-ended ferry, *Alameda*, introduced a concept that would be the standard in the Bay for years to come.¹⁴ A similar service, established in 1868 by real-estate promoters based in Sausalito, linked the city to the North Bay; here, passengers aboard *Princess* could enjoy a leisurely sail from Meiggs Wharf, near the foot of Powell Street, to Marin County. A third line, provided weekend service for East Bay residents heading to resorts along the Russian River. This operation began in 1915 with *Ellen* and continued uninterrupted until the line was superseded by the Richmond–San Rafael Bridge in 1956.¹⁵ Taking their cues from the highly successful ferry system perfected in New York Harbor, these lines maintained a fleet of double-ended vessels that were powered by walking-beam engines.

12 This Ferry House, immediate predecessor to the current Ferry Building, stood specifically at the foot of Market Street so that ferry passengers could transfer conveniently to horsecar lines that funneled to that point via the city's main artery.

13 At the same time, the Central Pacific was acquiring every available bayside plot in Oakland. Only the activities of Horace W. Carpentier, who secured exclusive rights to an area of the waterfront for \$5, 2 percent of all wharfage fees, the construction of three wharves, and the building of a public school—prevented them from acquiring total control. Woodruff Minor, *Pacific Gateway: An Illustrated History of the Port of Oakland* (Oakland: Port of Oakland, 2000). The Central Pacific and its successor, Southern Pacific, had a major presence along the waterfront south of Market Street, purchasing Tichenor's Ways (at Second Street) and acquiring the Pacific Mail Steamship Company facilities at the foot of First Street. They also enjoyed the only unbroken rail connection between the city and the transcontinental railroad, running trains through the peninsula, forcing their competitors to rely on connecting ferries that linked the city to the East Bay.

14 Many observers posit that San Francisco developed as a port largely through its role as a transfer point between the river trade and the deepwater and coastal traffic. Mel Scott, *The San Francisco Bay Area: A Metropolis in Perspective* (Berkeley: University of California Press, 1985).

15 The 135-foot *Ellen* had been built in 1883 and was long used on the Vallejo–Mare Island run.

The two largest commuter ferry operators in San Francisco were the Key Route System and Golden Gate Ferries, a subsidiary of the Southern Pacific Railroad designed to carry autos on three routes (from San Francisco to the North Bay, Berkeley, and Oakland, respectively).¹⁶ Both benefited from the tragedy of the 1906 earthquake. Many who worked in the city were forced by circumstance (or chose) to find housing elsewhere and the population of the Bay Area was significantly redistributed. Populations spread and communities in the East and North Bay grew tremendously: Oakland saw its population double, and nearby Berkeley tripled in size. Ferries, as a result, became important commuter vehicles. The iconic San Francisco Ferry Building, opened in 1898, handled over ten million passengers annually by 1930, making it the second-busiest terminal in the world, trailing only London's Charing Cross Station.¹⁷ One hundred seventy ferries called at or departed from San Francisco each day during the Roaring Twenties, as approximately fifty million passengers utilized the system in any given year. The Key System, with its fleet of dark orange ferries operated interurban service between San Francisco and East Bay communities from 1903 until January 14, 1937, when the Bay Bridge opened. Beginning in 1939, Key Route light-rail trains rumbled across the lower deck of the span, a link that remained unbroken until the early 1950s. This corporation made tremendous jumps in marine engineering, building a series of propeller-driven and turbo-electric (from 1923) craft that ran from San Francisco to the Oakland Mole, a shallow-water harbor located where the Bay Bridge today enters Oakland.¹⁸

During the 1920s, ferries met increasing demands for the transportation of automobiles. The construction of boats designed solely for transporting motor vehicles, and the establishment of landings where they could be handled efficiently, were characteristics of this period. Beginning in 1922 with the diesel-electric *Golden Gate* and running auto ferries until it was absorbed by the Southern Pacific, Golden Gate Ferries enjoyed phenomenal growth, increasing profits at the rate of 26 percent per year. Inevitably, with the opening of the Golden Gate and Bay Bridges, these lines—as well as a pair of competing auto ferries that likewise crossed the Carquinez Strait, until they too, were superseded by bridges—were made obsolete, with their assets dispersed to ports as far-flung as Seattle and Montevideo.

16 Golden Gate Ferries was established as an auto ferry from Hyde Street Pier in 1922. Initially independent, it was purchased by Southern Pacific in 1926.

17 Labeled “the front door of San Francisco,” the building was designed by the illustrious architectural firm of McKim, Mead, and White, and its Roman Revival form represented a stylish anomaly along the utilitarian and billboard-strewn waterfront of the city. *San Francisco Chronicle*, January 18, 1914. On the ferry building itself, see Nancy Olmstead, *The Ferry Building: Witness to a Century of Change* (Berkeley: Heyday Books, 1998).

18 Among the most important minds behind the development of the Key Route system was Borax Smith, of “twenty-mule team” fame. On the Key Route system, consult Walter Rice and Emiliano Echeverria, *The Key System: San Francisco and the Eastshore Empire* (San Francisco: Arcadia Books, 2007). See also Harre W. Demoro, *The Key Route: Transbay Commuting by Train and Ferry* (Glendale, CA: Interurban Press, 1985).

Eureka

Among the best-preserved examples of Bay Area ferryboats is Eureka, currently housed at the Hyde Street Pier. Built in Tiburon in 1890 for the San Francisco and North Pacific Railroad Company (founded by Peter Donohue in 1869), the craft originally bore the name Ukiah, a nod to the Northern California city recently added as a stop by the controlling railroad.

A magnificent side-paddle wheel ferry, Ukiah shuttled railcars from the city to Tiburon. A lower deck accommodated railcars, while the upper promenade offered breathtaking vistas for commuters. Double-ended so that no time would be wasted in turning around prior to docking, she was designed for speed. A massive walking-beam engine produced by San Francisco's Fulton Iron Works propelled the twin-decked, three-hundred-foot ship across the Golden Gate. At more than forty-feet tall, and nearly six feet across, the huge engine twelve-foot stroke drove the twenty-seven-foot wide paddlewheel to the delight of passengers who watched the operation from behind safety glass. In the wake of the great earthquake of 1906, the vessel saw major changes in its ownership as its controlling interest was absorbed by the Northwestern Pacific Railway, itself jointly owned by the Southern Pacific and Santa Fe Railroads.

After three decades service, she was overhauled in 1920. Featuring a new superstructure, she was transformed into a passenger-auto ferry and renamed Eureka, the new northern terminus of the controlling railroad. In this inception, she could accommodate 2,300 passengers and over 100 automobiles. She was considered both the largest and fastest ferryboat in the world at this time. After 1929, the vessel was maintained solely by the Southern Pacific, which incorporated the ferry as part of the world's largest fleet, with some forty-two craft that delivered passengers to destinations around the Bay. Within a decade, Eureka and her counterparts transported some forty million passengers and six million vehicles each year. Renowned for her speed, she was reputed to transit the run from Sausalito to the San Francisco Ferry Building in under twenty-eight minutes. Passengers could enjoy loitering near the on-board newsstands, grab a hearty meal at the sit-down restaurant, or play cards in the spacious lounge. The opening of the Bay and Golden Gate Bridges caused serious reductions in ferry operation, and Eureka made the last Sausalito run in 1941. The Southern Pacific maintained a small fleet of boats that brought San Francisco passengers to East Bay destinations to connect with long-distance rail service, but few, if any commuters used this service. Eureka remained in this employ until February 10, 1957, when she broke a crankshaft en route to the city from Oakland. The last commuter ferry operated for an additional year before it, too, fell silent due to the drop in demand.

The San Francisco Maritime State Historical Park acquired Eureka so as to share her with subsequent generations. The last remaining wooden-hulled ferryboat in the United States, Eureka possesses the last walking-beam engine on any ship afloat, and she was designated a National Historic Landmark and in 1993–1994, underwent a \$3,4-million restoration enabling her to receive countless visitors in the following years.

The bridges essentially ended the first era of bay ferries by the end of the 1930s, though the last day is usually taken as July 29, 1958 (the last transbay ferry crossing). On that day, *San Leandro* departed San Francisco for the Oakland Mole to rendezvous with a transcontinental railroad line.¹⁹ The second stage of ferry-as-commuter-vehicle began in the 1970s, initiated by a classical historical evolution: the ferries brought traffic to make the bridges feasible, until traffic overran the bridges, making ferries viable again. Before analyzing that stage in ferry history, we look first at an iteration of Bay Area ferry service.

More ferry routes were established by railroads than other connections, and the most important of the ferry routes—whether established by railroads or not—were those connected with a rail line. By the 1870s, most of the Bay ferries in operation were owned by the railroads, serving as maritime continuations of those systems. By 1930, the Southern Pacific Railroad, which began ferry service on February 17, 1885 with ten vessels named for various Indian tribes, claimed the world's largest ferry fleet with a staggering forty-three vessels.²⁰ Their annual traffic included forty million passengers and sixty million automobiles.

Ferryboat Contra Costa

While railroads began delivering more cargo and passengers once carried by ships, they still encountered unsolvable problems. Among the most notable were the deepwater straits separating the city of San Francisco from the rich agricultural regions of the Central Valley. To deal with this challenge, railroads constructed huge ferries to transport entire trains across the Carquinez Strait. The railroad ferries Solano and Contra Costa were the largest such vessels ever constructed.

The Central Pacific operated a small fleet of a half-dozen vessels, ranging from the passenger ferry *El Capitan* to the enormous railroad ferry Solano. When the Central Pacific was acquired by the Southern Pacific in 1885, that entity continued the boatbuilding operations. Among the vessels built by the Southern Pacific was the Contra Costa, the world's largest double-ended, steam-driven, paddlewheel train-car ferry in the world.

Contra Costa was launched on May 16, 1914. Extremely light-drafted, she was over 433 feet long and 116 feet wide. Constructed from two million board feet of Douglas fir at a cost of around \$400,000, she required over one hundred tons of galvanized iron fastenings and some 16,000 nails. The ferry was equipped with four sets of railroad tracks on its main deck, and could accommodate up to thirty-six freight cars (or two dozen passenger cars) and two locomotives. There were four rudders on each end of Contra Costa to assist with steering in the narrow confines of the Carquinez Strait; hydraulic power assisted with the steering engines and operated the hinged aprons that allowed for the loading and unloading of the trains. Eight massive boilers, running eleven by thirteen feet, supplied motive power to a pair of twenty-eight-foot paddlewheels,

19 Harlan, *San Francisco Bay Ferryboats*, 120–21.

20 In 1921, the Southern Pacific ferried some 27 million passengers over the bay. See David F. Myrick, *Southern Pacific Water Lines: Marine, Bay, and River Operations of the Southern Pacific System* (Pasadena: Southern Pacific Historical and Technical Society, 2007). By contrast, the Key Route system could claim but 15 million, and the Northwestern Pacific, a rival railroad that ran ferries across the Golden Gate, just 7 million. On the last, see Fred A. Stindt, *The Northwestern Pacific Railroad: Redwood Empire Route* (Kelseyville, CA: Fred Stindt Publishing, 1964).

which could be worked independently. A pair of 7,800-gallon fuel tanks complemented four freshwater tanks of the same size.

Above deck, *Contra Costa* provided opulent comforts. Telephones were found throughout the galley, saloon, and restaurant, and the entire vessel was illuminated by modern electric lights. The mile-wide straits were crossed in style and quickly, averaging but eight minutes, allowing for hourly trips from Solano to Contra Costa Counties. *Contra Costa* operated between Port Costa and Benicia for more than a decade and a half. Upon completion of a railroad bridge across the straits in 1929, the ferry was no longer needed. Abandoned the following year, her remains can be seen at low tide in the waters of Morrow Cove, now home to the California Maritime Academy.

The first ferry to connect with a railroad was *Contra Costa*, launched on September 2, 1863 as the centerpiece of the San Francisco and Oakland Railroad Line. The next year saw an additional line, the former riverboat *Sophie Maclane*, placed by the San Francisco and Alameda Railroad Company. Ferries began serving North Bay rail connections with the Petaluma and Haystack railroad in that same year (1864). Subsequent ferry service operated by the San Francisco & North Pacific Railroad and Petaluma & Santa Rosa Railroad connected Petaluma River landing locations (and later Tiburon) with the city, while North Pacific Coast Railroad ferries linked Sausalito with San Francisco (operating under the Northwestern Pacific Railroad from 1907) until the Golden Gate Bridge opened.²¹

On September 6, 1869, *Sophie Maclane*, now operated by the Central Pacific Railroad, made history by becoming the first ferry to meet a transcontinental train, doing so at the Alameda Wharf. The Central Pacific was the largest operator of ferries, with more routes, passengers, and steamers than any rival. That entity and its successor, the Southern Pacific, maintained a pair of railroad ferries (*Solano* and *Contra Costa*) that transferred entire trains across the Carquinez Straits and which established records as the world's largest ferry-boats.²² At 424 feet, and a breadth of 116 feet, *Solano* carried as many as four dozen railcars and a locomotive. Built in 1878, she was surpassed only by *Contra Costa*, built in 1914, and both vessels remained in service until 1930, when a railroad bridge linking Martinez and Benicia made crossing the Carquinez Straits easier.

Another passenger line ran from the city to Vallejo, connecting with the San Francisco, Napa, and Calistoga Railway. The Monticello Steamship Company, named in honor of the first vessel of the fleet, began operations in 1895 and ran until 1937. It used single-enders of a design much like the Long Island and Chesapeake Bay packets, and in fact, after the opening of the Panama Canal, the company acquired a few such steamers from Eastern waters. Of course, ferries were not immune to accidents. One of the more spectacular occurred on February 27, 1888, when *Julia*, a passenger ferry employed on the

21 Likewise, both the Santa Fe and Western Pacific Railroads established a presence in the city, constructing car ferry terminals to connect the city to feeder lines in outlying areas, allowing the means for San Francisco-based businesses to extend their reach far beyond the geographical confines of the port.

22 "World's Largest Steam Ferry," *International Marine Engineering* (November 1914): 8. See also "New Ferries Under Way for Southern Pacific Company," *Pacific Marine Review* (November 1914): 69; "Southern Pacific Yard Busy," *Pacific Marine Review* (November 1914): 247; and Edward W. Olin, "Side Wheel Car Ferry *Contra Costa*," *International Marine Engineering* (September 1915): 387-94.

Carquinez Straits, exploded prior to its inaugural run. More than thirty persons perished in a dramatic scene heard for miles around. *Julia* was one of the first on the Bay to burn oil rather than coal, and the inexperience of her crew in the new system was widely blamed for the catastrophe.

The coming of the automobile not only spurred changes in ferryboat service and operation but also signaled the end of that system. The opening of the Golden Gate and Bay Bridges in the late 1930s severely curtailed ferry business; the Southern Pacific, for example, reduced their fleet to a half dozen in 1951. Between 1945 and 1957, approximately two hundred miles of freeway were built in the greater Bay Area, with another hundred planned or already under construction. While the creation of the bridges and freeways might have signaled the death knell for commuter and passenger ferries, this was but a momentary lapse. The Golden Gate Bridge District kicked off the modern revival of passenger ferries in the Bay: Harlan Soeten, then curator of the Maritime Museum, spearheaded the effort to establish this service, and was its first operations manager. In due time, the traffic congestion spurred new lines, and Bay Area ferries were resurrected in the guise of the Red and White and Blue and Gold fleets (named, respectively, for Stanford and UC Berkeley, the alma maters of their founders).²³

While the aforementioned ferry service operated exclusively within the confines of the Bay, there were similar riverboat operations bringing goods and passengers from the city to the delta and vice versa. Sailing vessels found it difficult to navigate the twisting waterways of the delta. Winds (or lack thereof), tides, currents, and shifting sandbars required skippers to employ alternative methods of moving upriver. Winching, towing, or otherwise working their way upriver was laborious and time-consuming. Scow schooners were reliable, but could be agonizingly slow. Steamboats would provide a better way.²⁴

River traffic was primarily destined for Sacramento, which served as the jumping-off point for the Argonauts en route to the diggings. That community had been settled by John Sutter in 1839, when the intrepid Swiss immigrant brought the twenty-ton vessels *Isabel* and *Nicholas*, two small craft that he had purchased after arriving in San Francisco on *Clementine*, upstream to a point at the nexus of the American and Sacramento Rivers.²⁵ There he established a lumber mill, around which grew a small community: it was incorporated as a town in 1848 and as a city in 1863. During the gold rush, it flourished as a transport station, with miners disembarking from Bay Area craft to make their way to the Sierra goldfields. One contemporary described it: "I never saw a more beautiful stream. In the rainy season, and in the spring, when the snows on the mountains are melting, it overflows its banks in many places. . . . It abounds in fish, the most valuable of which is the salmon, the largest and fattest I have ever seen. . . . I have seen salmon taken from the Sacramento that are five feet in length, all of its tributaries are equally rich in the finny tribe. . . . American enterprise will soon develop the wealth contained in these streams, which hitherto have

23 Blue and Gold was founded in 1978 by Roger Murphy, scion of a San Francisco family that had previously operated tugboat service on the bay. Red and White was founded by Tom Crowley, as an extension of the excursion boats used during the 1915 Panama Pacific Expedition, and carried on by his son, Thomas B. Crowley.

24 The river runs were not limited to such small craft. In spring 1849, two large oceangoing ships, *Joven Guipuscoana* (owned by Sam Brannan) and *Eliodora* (owned by Hensley and Reading) arrived in Sacramento.

25 *Nicholas* was reputed to be the pleasure craft of the king of Hawaii. Sutter relied on the navigational talents of eighteen-year-old William Heath Davis to lead the small flotilla. See Cortland Parker, *Up-Delta in the Early Days: A Cruise into the Past of the California Delta* (Benicia, CA; Gallagher Publishing, 2000).

been entirely neglected”²⁶ In subsequent years, it remained an important shipping point for agricultural products: fruit, wine, grapes, cotton, and vegetables abounded here and many new industries sprouted up around the turn of the twentieth century, including canneries, food processing, farm machinery, and of course assorted facets of maritime and maritime shipping. Sloops, schooners, brigs, and even ships navigated the rivers as far as Sacramento and Stockton, but this was difficult for sailing vessels, and steamers quickly took over. After the first years of the gold rush, increased ship size coupled with rapidly silting rivers from hydraulic mining closed the inland ports to most oceangoing vessels, though palatial side-wheelers continued making the trek.²⁷

The wealth of the interior soon gravitated toward San Francisco. A quartet of piers (1, 1 ½, 3, and 5) opened just north of that city’s ferry building in 1918 to handle inland trade and transport. To alleviate bottlenecks and congestion caused by the runoff from hydraulic mining operations, the river channel was dredged and widened in 1911, connecting Sacramento’s harbor to San Francisco Bay via a deepwater ship channel. These improvements facilitated the growth of communities in the Sacramento and San Joaquin Valleys and fostered California’s agricultural business, making the state the richest in the nation. In later years, the famous *Delta King* and *Delta Queen*, featuring 2,000-horsepower engines with ten-foot strokes, provided overnight connections between San Francisco and Sacramento from Pier 1 ½, making it an important gateway for public travel to the state’s interior.²⁸

The first generation of riverboats seen on Western waters was, by and large, made up of Eastern vessels that had come around the Cape, disassembled as cargo in sailing ships. The first of these so-called “knockdown steamers,” *Sitka*, was brought to the Bay Area in pieces aboard the Russian bark *Naslednich* in 1847.²⁹ At 37 feet long, with a beam of 9 feet and a draft of 3 feet, the side-wheeler was well suited to delta operations. Consigned to William A. Leidesdorff and immediately put into service, she suffered an ignominious debut.³⁰ Launched on November 29, 1847, she headed for Sacramento, reaching New Helvetia in six days and seven hours.³¹ (By comparison, just three years later, the bark *Whiton*, at 241 tons, finished a 140-day sail from New York by navigating upriver from San Francisco to Sacramento in seventy-two hours). On her downriver trip, she was beaten to

26 Edwin Bryant, *What I Saw in California* (New York: D. Appleton and Company, 1849).

27 Stockton, located about 70 miles from the Golden Gate, was eventually opened to oceangoing steamers thanks to Congressional appropriations that successfully deepened the ship channel. George P. Hammond, *The Weber Era in Stockton History* (Berkeley: Friends of the Bancroft Library, 1982).

28 The vessels, launched at Stockton in 1927, featured 250-foot hulls and stern-wheel overhangs that brought the total length to 285 feet. Stan Garvey, *King and Queen of the River: The Legendary Paddle Wheel Steamboats Delta King and Delta Queen* (Menlo Park, CA: River Heritage Press, 1995).

29 Jerry MacMullen, *Paddlewheel Days in California* (Palo Alto, CA: Stanford University Press, 1944), remains the standard text on this subject. A nicely illustrated compendium is Paul C. Trimble, *River Boats of Northern California* (Charleston: Acadia Books, 2011).

30 Leidesdorff, a native of the Virgin Islands, was the son of a black woman and a Dutch sailing master. He immigrated to New Orleans, where he became wealthy in the cotton trade. Moving to San Francisco in 1841, he built the first hotel in the city and operated a large warehouse on Yerba Buena cove. The first treasurer of San Francisco, he also served on the inaugural school board and held a position as vice-consul of the United States.

31 That same month saw the inaugural run of *Stockton*, bringing passengers between Sonoma and San Francisco. George and Roger Emanuels, *Schools and Scows in Early California* (Sonoma, CA: Sonoma County Historical Society, 1998), 61.

Benicia by at least four days by an ox cart.³² This inauspicious start did not bode well for her future. On February 12, 1848, *Sitka* was sunk after running aground. Subsequently raised, her engine was used for a factory ashore, and her hull was re-rigged as a schooner named *Rainbow*.³³ Despite these initial failures, steamboat operations on the inland rivers continued undeterred.

Following *Sitka*, *Lady Washington* was assembled at Sutter's Sacramento Embarcadero, heading into the Bay on August 9, 1849. She went up the Sacramento and American Rivers as far as Coloma, then started back. Like her predecessor, she struck a snag and went to the bottom; she, too, was raised and steamed again as *Ohio*. A similar fate awaited *Edward Everett Junior* (transported to California via the sailing ship *Edward Everett*), a 50-foot stern-wheeler that snagged on the American River and sank in 1849; *Plumas*, a 51-ton stern-wheeler victimized by Sacramento River snags in 1854; and *Pioneer*, a Benicia-assembled side-wheeler that snagged and sank on the Feather River in 1849.

In addition to these dangers, the unique situation of frontier California presented several needs. The first need was the creation of a local shipyard to assemble and outfit the steamers, sent in parts, via sailing ship. Lieutenant James Blair, USN, an associate of William Aspinwall of the Pacific Mail Steamship Company (and pilot of *Senator* on that vessel's first trip upriver), organized and built the Sutter Iron Works on Rincon Point to assemble engines and steamboats sent from the East Coast on sailing ships. Staffed by the best shipwrights and engineers from Philadelphia, Blair headed the firm until his death in 1853.

Numerous early steamer disasters demonstrated the need for shallow-draft vessels capable of navigating the perilously shallow waters of the delta. "Trading" boats (or "mosquito" boats) provided a solution, transporting cargo from ports like Rio Vista as far as two-hundred miles inland. They were reputed to steam wherever the ground was wet, bringing agricultural products back to the greater Bay Area on their return trips. This smaller class of "skimmer steamer" served around sixty landings between Rio Vista and Clarksburg, since virtually every ranch or farm had a landing, often devoid of wharves or similar conveniences. Chaotic competition marked the business, though there were some small regional monopolies.³⁴ Larger vessels tended to end their runs from San Francisco in Sacramento, transferring their passengers and cargo to smaller steamers at that port.

In 1875, the California Transportation Company (CTC) was formed to control this business, profitably operating a small fleet of shallow-draft stern-wheelers until the automobile made water transportation too costly.³⁵ To keep their extensive river fleet in repair,

32 *California Star*, December 18, 1847. A more gentle interpretation stated that "it would detract from her fame to place on record the time of her first trip." John H. Brown, *Reminiscences and Incidents of the Early Days of San Francisco* (San Francisco: Grabhorn Press, 1933), 116.

33 John Kemble, doyen of West Coast maritime historians noted that the *Rainbow* "was one of those 'morning illuminations' of which sailors take warning. . . . It had not bright promise to be fulfilled. . . . It was the shell of the grub from which the butterfly had departed." John Haskell Kemble, "The First Steam Vessel to Navigate San Francisco Bay," *California Historical Quarterly* 14, no. 2 (June 1935): 143–46.

34 One such fleet was managed by the Mokelumne River Steam Navigation Company, which operated the ships *Mary Ellen* and *OK* to Woodbridge and beyond. An evocative, firsthand account of the river landings can be found in John Leale, *Recollections of a Tule Sailor by a Master Mariner* (San Francisco: George Fields, 1939).

35 Illustrative of the fleet was the 110-foot *Fanny Ann*. See also Clifford C. Weidemann, "Memoir of a Young Sternwheeler Pilot on the Sacramento," *Mains'l Haul: A Journal of Pacific Maritime History* 33, no. 4 (1997): 20–27.

the CTC operated a yard at Stockton Channel.³⁶ That port served as a central hub, first for wagon trains, and later for railroads. It was stated that no Pacific coast port had better rail connection than Stockton: the Southern Pacific, Santa Fe, and Western Pacific all made direct connections to the city, and the Northern Pacific tied in nearby. In addition, several shorter regional and branch lines crisscrossed the region, allowing a fledgling intermodal connection at the port.³⁷

Unlike *Sitka* and *Lady Washington*, the New Brunswick builders of *S. B. Wheeler* (which arrived via the bark *Fanny*) specifically designed her for the California trade. The 120-ton stern-wheeler arrived almost fully built to Benicia: *Fanny* had no deck, and *S. B. Wheeler* was devoid of her upper works, allowing her to nestle into the hull of the bark. The then-stern-wheeler's engine and upperworks were stowed, the bark was decked and masted, and upon arrival, the process was reversed: the decks of the bark were removed, she was sunk, the steamer floated, and the bark raised. While *Fanny* returned to sea, *S. B. Wheeler* operated on the San Francisco to Stockton route for years, until she was sold to a Mexican firm.³⁸

Arriving via the Straits of Magellan, eastern steamboats made up the next iteration of riverboats. Larger than their knockdown cousins, the first was *McKim*, a 200-horsepower steamboat brought to San Francisco by the firm of Simmons, Hutchinson, and Company. Built at an expense of \$100,000 she cost another \$30,000 to transport, but she ushered in a period of "floating palaces." Entering service in 1849, she accommodated sixty passengers paying \$35.00 for an overnight cabin and an additional \$1.50 for dinner. Others included *Wilson G. Hunt*, a 450-ton steamer built in 1849 for the excursion trade between New York City and Coney Island. She came to California in 1850, enjoying great success in the river trade between San Francisco and Sacramento until her sale in 1858. While *McKim* and *Wilson G. Hunt* were designed primarily for passenger trade, others were pressed into service for which they were ill prepared. Built by William H. Webb in New York in 1848, *Goliah* was the second American vessel launched expressly as a tug. She came to California in 1851, operating as a passenger steamer on the Sacramento River and along the coast, undergoing modification, reconstruction, and enlargement in the process. By 1864, the walking-beam side-wheeler returned to her intended service as a tugboat.

The most notable example of an East Coast vessel engaged in California riverboat operations was *New World*. Built in New York, this magnificent 530-ton side-wheeler featured plush red upholstery, marble-topped tables, and brass chandeliers. The extravagance, however, bankrupted owner William H. Brown. Rather than a festive launching, liens were nailed to the pilothouse door and deputy sheriffs made themselves at home on "the best sofas in town" to prevent any sailing until Brown's debts were paid. But Brown

36 For a firsthand account of the trip to Stockton, see "The Great Yo-Semite Valley," *Hutchings' California Magazine* 4 (October 1859), reprinted in *Scenes of Wonder and Curiosity*, ed. Roger Olmsted (Berkeley: Howell North, 1962). A well-researched photographic essay of upriver boats, including construction details, is Edward Galland Zelinsky and Nancy Leigh Olmsted, "Upriver Boats—When Red Bluff was the Head of Navigation," *California History* 64 (Spring 1985): 86–117.

37 On the development of the port of Stockton, see Nicholas P. Hardemann, "Overland in Cargo Ships: The Inland Seaport of Stockton, California," *Journal of the West* (July 1981): 75–85.

38 Other accounts of early trips upriver are in Elisha Oscar Crosby, *Memoirs: Reminiscences of California and Guatemala, 1849–1865*, ed. Charles Albro Barker (San Marino, CA: Huntington Library, 1945); Adolphus Windeler, *California Gold Rush Diary of a German Sailor*, ed. W. Turrentine Jackson (Berkeley: Howell-North, 1969); and Bayard Taylor, *El Dorado, or Adventures in the Path of Empire* (1850; reprint, New York: Knopf, 1949).

persuaded the deputies to allow the launch to continue, and his captain, Ned Wakeman, saw that steam was up in the boilers. As soon as the vessel took the water, Wakeman claimed his all-embracing authority as master and headed for the open seas. Offshore, later in the day, the deputies were lowered overboard in one of the steamer's boats and allowed to go ashore. The irrepressible Wakeman then headed for Rio de Janeiro, where *New World* had to stop for fuel. Knowing that he lacked the necessary legal documents to explain his presence, Wakeman threw himself overboard as the steamer approached the dock. He then explained to the consul that he had fallen overboard, lost the documents, and was promptly issued new ones.³⁹

At Panama, Wakeman knew two things: authorities were waiting for him, as well as people willing to pay handsomely for passage to the goldfields of California. Wakeman anchored *New World* behind an island, swam ashore, and informed the locals that his vessel would come in the next morning. The law was cowed by the shouting mob, and *New World* steamed for the Golden Gate with three hundred paying passengers.⁴⁰ Arriving in Sacramento October 15, 1850, *New World* discharged its passengers, including one ravaged with cholera. Over the next several weeks, it is said that four-fifths of the populace fled to more salubrious climes, while another eight hundred succumbed to the illness.

Other famous vessels to arrive via the Straits of Magellan include the Boston-built, 750-ton *Senator*. Built for \$150,000, Captain John Van Pelt brought her from San Francisco to Sacramento in nine hours. In addition, the 202-foot side-wheeler *Antelope* served as the Western terminus of the Pony Express, bringing mail from Sacramento to San Francisco at the rate of \$5 per ounce.⁴¹ *Senator*, in particular, was notable. Prospectors paid anywhere from \$45 to \$65 for passage upriver, allowing the vessel to gross as much as \$50,000 per trip—more than any steamboat in history. Following her November 5, 1849, inaugural run, she made thrice-weekly sailings, arriving each time with 300 passengers and 300 tons of freight.⁴² Of *Senator* it was said that “more substantial, commodious, rapid, and well-constructed steamers are not to be found on the waters of any other part of the globe.”⁴³

The steamers, whether coming from the East Coast under their own power, as cargo in larger vessels, or as locally built craft, successfully integrated into the region. They could also be extremely profitable. By November 1849, *John A. Sutter* ran as far as Stockton, arriving on November 15, 1849, and clearing over \$300,000 before being lost in a spectacular 1850 explosion. This type of event was not uncommon. Inefficient plants and inexperienced crews often meant unmitigated disaster. On October 29, 1850, the 66-ton *Sagamore* blew up, killing fifty passengers. Her engines were salvaged and installed in *Secretary*, which itself exploded on April 15, 1854, killing sixteen. On October 18, 1853, a pair of explosions rocked the San Francisco–Sacramento corridor. In the predawn hours, the iron side-wheeler *American Eagle* (built on the East Coast in 1851) blew up, killing five. Just twelve hours later,

39 On Wakeman, see Gordon R. Newell, *Paddlewheel Pirate: The Life and Adventures of Captain Ned Wakeman* (New York: Dutton, 1959).

40 As a riverboat, *New World* was virtually unsurpassed. On April 15, 1851, she completed the run from San Francisco to Sacramento in an astonishing in five hours and thirty-five minutes, shaving some eight hours off the usual fourteen-hour journey. In later years, *New World* joined *Sacramento* to form the basis of a ferry system operated by the California Pacific Railroad Company.

41 Others that came via the straits included *General Warren*, *California*, *Sarah*, *Hartford*, and *Governor Dana*.

42 John Haskell Kemble, “The *Senator*,” *California Historical Quarterly* 16 (1932): 61–70.

43 *San Francisco Picayune*, October 10, 1850.

the side-wheeler *Stockton* exploded, killing a pair of passengers and injuring eight others. On April 11, 1853, *Jenny A. Lind* suffered thirty-one casualties when her boiler exploded off San Francisquito Creek. The 73-ton *J. A. McClelland* blew up on August 25, 1861, killing fifteen, and the 93-foot stern-wheeled *Belle* sank in shallow water just beyond the Sacramento River's Horseshoe Bend on November 18, 1870.

Despite the dangers, the demand for speedy travel to the goldfields attracted passengers and competition. Steamboat operators sensed an opportunity for large profit: the side-wheelers *William Robinson*, *El Dorado*, and *Mariposa* soon moved into service, touching off a price war. In December 1851, *Erastus Corning* charged but \$1.50 for deck fare, and by April the following year, no fewer than seven steamers traveled daily from San Francisco to Sacramento. Greedy entrepreneurs flooded the market, with at times upward of fifty craft crowding the narrow channels leading to Sacramento. Soon, cutthroat competition drove these fares down to the ridiculously low rate of \$1; freight rates, which had been \$50 per ton, fell soon thereafter to the same level. Competition threatened to ruin all players in the field, until the California Steam Navigation Company formed in 1854. This conglomerate quickly monopolized river traffic and brought some sense of order to a chaotic scene. From that point, the conglomerate dominated traffic on the Sacramento and San Joaquin rivers, transporting passengers in lavish comfort aboard fine steamboats built expressly for the trade. *Chrysopolis*, a 245-foot side-wheeler with a capacity for 1,000 passengers built in San Francisco by John North in 1860, was one of the finest and fastest steamers in the fleet, crediting with making the run in five hours, nineteen minutes.⁴⁴ *Nevada*, *Yosemite*, *Washoe*, and *Capital* fleshed out the fleet, docking at Rio Vista on their runs between San Francisco and Sacramento.⁴⁵ With the completion of the transcontinental railroad in 1869, the venture began losing customers and money, absorbed two years later by the Central Pacific Railroad.⁴⁶

In addition to increased competition on the San Francisco–Sacramento corridor, service expanded to other towns, pushing farther and farther inland. By late 1849, *Linda* inaugurated service to Marysville on the Feather River (it was en route to this destination that *John A. Sutter* had met its fate.) By April 1850, *Aetna* reached Norristown on the American River, and the following month saw *Jack Hays* navigate as far as Redding on the Sacramento River and *Dolphin* initiate service on the Napa River. At about the same time, *Georgiana* left Stockton for Tuolumne City (on the Tuolumne River), the service she initiated south of that locale eventually reaching Firebaugh's Ferry (on the San Joaquin River) in Fresno County. All told, by the end of 1850, just a few years after *Sitka*'s first forays into the Delta, there were 28 steamboats on the Sacramento and Feather Rivers alone, though the low water levels encountered in some sloughs required that paying passengers assist in pushing the boats off mud banks.⁴⁷ (The last of the passenger stern-wheelers—steel-hulled

44 This equates to 19.8 knots, or in excess of 22 miles per hour. John Haskell Kemble, "Chrysopolis: the Queen of the Golden River," *American Neptune* 2 (October 1942): 299–306.

45 *Nevada*, entering service in 1861, was lost two years later when she hit a snag and sunk while racing the speedy *New World*. The 580-ton side-wheeler *Washoe* was destroyed by fire in 1864 during a similar race. Both *Nevada* and *Washoe*, incidentally, were captained by the same man, George Washington Kidd. *Yosemite* endured an even worse fate. Departing Rio Vista on October 12, 1865, with 300 passengers and 50 Chinese laborers, the vessel exploded. One hundred fifty persons, including all the Chinese, perished.

46 Even with the advent of the railroad, riverboats continued to be economically important. Operating until the 1930s, they shifted from fast side-wheelers to more sedate stern-wheelers, and changed their emphasis from passengers to freight (with some passenger accommodations).

47 *Hutchings' California Magazine*, January 1860.

night boats operated by the River Lines—departed from Stockton in 1940, shortly before the routes were eclipsed by automobile traffic.⁴⁸) An additional 23 barks, 19 brigs, and 21 brigantines sailed to Sacramento from offshore routes.

This last statistic is telling. For all the impact that Bay and inland shipping had on the economic integration of the region, it paled in comparison to that which was carried on coastal vessels. Trade between American ports is the subject of the next chapter.

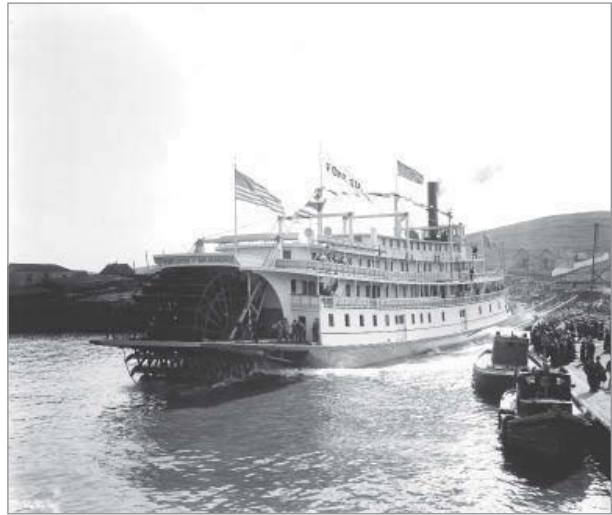
⁴⁸ These were *Delta King* and *Delta Queen*. The shift from side-wheeler to stern-wheeler occurred in the 1870s, at which point the railroad had reached San Francisco Bay. From that point, there was no longer a need for high speed in the river steamers, and thus the switch to cheaper, slower, and shallower-draft stern-wheelers.

Launched in 1926, Delta Queen transported 200 passengers in luxury. With hulls built in Scotland, decks composed of Oregon timber, a German-manufactured crank-shaft, and San Francisco-produced engine, she was truly representative of San Francisco's international maritime heritage.



Courtesy San Francisco Maritime National Historical Park. P82-019a-1854 pl.

This photo by Harold McCurry depicts the riverboat Fort Sutter at her launching from the Schultze, Robertson, and Schultze Shipyard, near Hunter's Point in 1912.



Courtesy San Francisco Maritime National Historical Park. A4.20,378 pl.

Ferryboat Eureka at work in San Francisco.



Courtesy San Francisco Maritime National Historical Park. 90-006.5.

A map detailing the extensive water transportation system available to Bay Area residents.



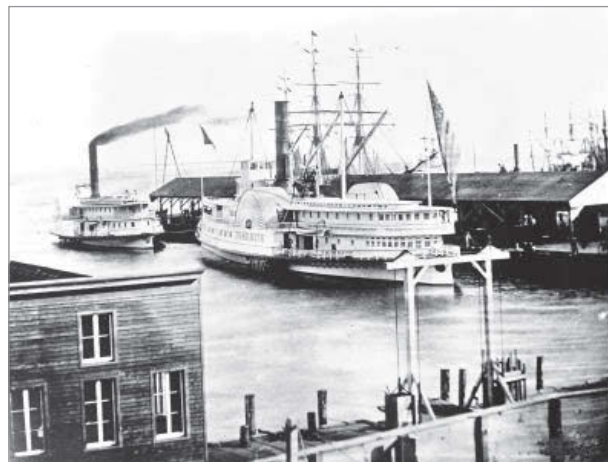
Courtesy San Francisco Maritime National Historical
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Hay scow Annie L., built by Emil Munder in 1900 is a classic example of the once-ubiquitous form. At 60 tons and 65 feet, she carried 350 bales of hay and could sail “anywhere that there was dew upon the grass.”



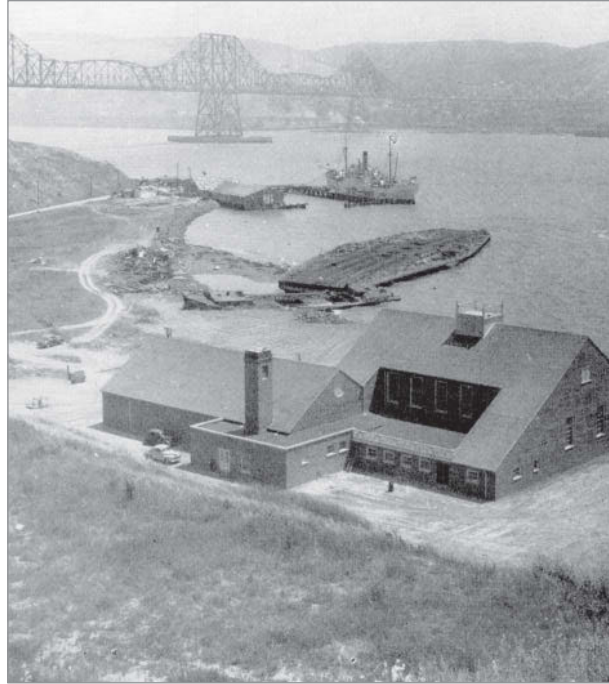
Courtesy San Francisco Maritime National Historical
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The ferry Yosemite at unidentified pier,
1867.



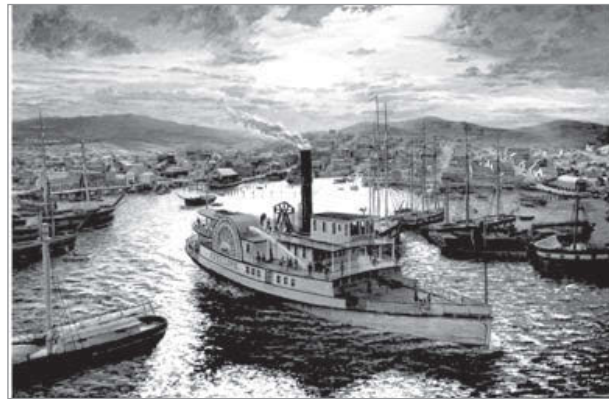
Courtesy San Francisco Maritime National Historical
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The railroad ferry Contra Costa dominates this image of the California Maritime Academy. In the background, the school's training ship sits docked beneath the Carquinez Bridge, while the foreground depicts the school's gymnasium. The ferry was dynamited in the 1960s, but its remains are visible to passersby at low tide



Courtesy California Maritime Academy Archives.

Maritime artist F. A. Zimmermann captures the frenetic pace of maritime activity on the bay in this image of the steamer Antelope departing for Sacramento in 1854. San Francisco's proximity to the goldfields made it a logical jumping-off place and port of transshipment.



Courtesy of the artist. Copyright F. A. Zimmerman.
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CHAPTER 9

COASTAL OPERATIONS: SUGAR, COAL, OIL, PASSENGERS

Just as whaling and fishing were important activities in maritime California, so too were several other components of the coastal trade—notably sugar, coal, oil, general goods, and passenger traffic—all discussed in this chapter. For many years, coastal and short-sea trade was larger in scale and more important than overseas trade, and crucial in the development of industrialization and urbanization that took place from the late eighteenth to the mid-twentieth centuries. Despite this, the amount of coastal and short-sea trade scholarship has been negligible, and may observers have either ignored or downplayed the role of this form of transportation. As one observer states, “For most of US history, shipping on coastal and inland waters has exceeded oceanic shipping in both volume and value. . . . America is a brown-water nation, but with a blue-water consciousness.”¹ Perhaps the airing here of the important contributions the coastal trade made to the economic and social growth of the West Coast of the United States will stimulate further research in this topic.

When most people think of maritime trade and transport, their minds draw first to deepwater, international commerce. Since over 95 percent of all foreign trade is carried by ship, this is understandable: the problem arises when one fails to recognize that coastal commerce—carried on between two American ports—is far greater in terms of the number of vessels engaged, seamen employed, and cargo moved. Moreover, for the four-decade period covered by this chapter (1870 to 1910), the United States dropped from second in tonnage engaged in foreign trade to ninth. During that same period, the tonnage engaged in coastal trade rose from 2.6 million tons to 6.5 million tons, a 3 percent annual growth rate.² In 1889, to give but one example, over 650,000 voyages were made between Pacific coast ports alone; the cargoes were telling: in addition to 4.2 million tons of lumber, they carried over a million tons of agricultural produce and a comparable amount of coal.³ Perhaps most notable, the 1.7 million tons of general cargo attest to the fact that seaborne commerce—and not railroad or other form of overland transportation—reigned supreme throughout this era.

Trade between two American ports is decidedly different from that which marks international commerce. Since early in this nation’s history, a series of restrictions, known collectively as cabotage laws, have sought to protect this trade and limit it to US-flagged ships. Cabotage laws take a variety of forms, but they usually operate via financial inducements or penalties. Some laws may impose severe taxes on shippers who utilize foreign-flagged ships to do, in the words of Thomas Jefferson, “their fetching and hauling.”⁴ Others effectively exclude non-Americans from coastwise trade as a matter of national security and defense. Various iterations of these cabotage laws have increased the requirements through the years:

- 1 Alex W. Roland, W. Jeffrey Bolster, and Alexander Keyssar, *The Way of the Ship: America’s Maritime History Reenvisioned, 1600–2000* (Hoboken, NJ: John W. Wiley and Sons, 2008), 1.
- 2 John Armstrong, “The Role of Short-Sea, Coastal, and Riverine Traffic in Economic Development since 1750,” *Maritime History as World History*, ed. Daniel Finamore (Gainesville: University Press of Florida, 2004), 119.
- 3 Wallace Martin, *Sail and Steam on the Northern California Coast, 1850–1900* (San Francisco: National Maritime Museum, 1983), 52.
- 4 Quoted in Joshua Smith, *Voyages, Documents in American Maritime History: The Age of Sail* (Gainesville: University Press of Florida, 2009), 172

since the 1920s, craft engaged in trade between two consecutive American ports needed to be US built, flagged, officered, and crewed. This had important implications for coastwise trade, implications that affected costs, business strategies, and management decisions.

The coastwise trader was not unknown before this period. Indeed, maritime commerce had been important to San Francisco since its founding and the city's ports had good facilities for general cargo even at that relatively early time. Before the development of the transcontinental railroad (1869) and the opening of the Panama Canal (1914), the only way to link the eastern and western shores of the United States was via maritime connections that braved the Cape Horn route or an amphibious venture that integrated maritime routes with overland isthmian traffic. Operations such as the American-Hawaiian Steamship Line, among the earliest to employ American-built steel freighters, connected the Atlantic and Pacific coasts by way of the Straits of Magellan. This route was inaugurated in 1900 and remained commercially viable and economically important until the mid-1950s.

Trade between the Atlantic coast and California represented the longest domestic trade route in the world and the gold rush, as we have seen, depended upon this. From the Atlantic, intercoastal traders brought different types of manufactured goods necessary for building towns and exploiting the land. The fact that all necessities of life in early San Francisco came from the East Coast led to two things: stimulation of shipbuilding on the Atlantic Seaboard (since anything that sailed was already gone to California) and a premium placed on speed. As we have already seen, the California market maintained New England shipyards that turned out Downeasters in prodigious quantities, even when there was scarcely any need for more wooden sailing ships, leading to the dramatic, if short-lived, era of the clipper ship. The opening of the Panama Canal in 1914 likewise played an important role in California's maritime history, as the isthmian passage superseded the trip around Cape Horn, reoriented trade, and replaced time-tested merchant connections with new relationships.⁵ The completion of the isthmian route represented more than just a tremendous engineering feat; by halving the distance between California and the East Coast, it further strengthened and solidified the connections between the coasts.

For the purposes of this chapter, coastal trade includes that which links two American ports, and for our purposes, we will consider Hawaii to be within this orbit. Although the United States did not acquire that territory until the eve of the twentieth century, there had been plans in place (and loopholes in the abovementioned laws) that allow it to be best considered as part of the American economic sphere from the middle decades of the nineteenth century.⁶

California, in general, and San Francisco, in particular, had a long relationship with Hawaii. Captains bound for the Golden Gate often called first at the Sandwich Islands, taking on fresh water and supplies, repairing their storm-wracked vessels, and filling out their complement of sailors by recruiting local *kanaka*. These native Hawaiians, deemed to be the best sailors in the world, were seen in the fur- and seal-hunting expeditions of the early nineteenth century, and as crew members of San Francisco-based whalers later in that

5 The canal opened to traffic on August 15, 1914, and was of almost immediate and immense benefit to the city's maritime trade. The Panama Pacific International Exhibit of the following year was a testament to this growth in trade.

6 See H. Brett Melendy, *Hawaii: America's Sugar Territory, 1898-1959* (Lewiston, NY: Edwin Mellen Press, 1999). See also Michael Dougherty, *To Steal a Kingdom: Probing Hawaiian History* (Waimanalo, HI: Island Style Press, 1992).

century.⁷ The connections between California and Hawaii were not coincidental: over 50 percent of the ships that called at California between 1786 and 1848 also stopped at a Pacific island, showing a deeper relationship than seasonal runs and shared crews. Despite Hawaii's seemingly isolated location in the middle of the Pacific, "Honolulu merchants carried on an active correspondence with their counterparts in California, demanding cleaner hides, complaining of bloated warehouses, and inquiring of market prices."⁸ While this background is important to contextualize and understand the strong connections between San Francisco and Hawaii, the best manifestation of the California-island connection is seen in the burgeoning sugar trade prominent in the years after the American Civil War.

During the 1870s, island sugar began to find a market in the States, despite the often-vocal protestations of Southern producers seeking to maintain their monopoly on the crop, and from some California producers who rankled at the thought of competition to their beet-sugar monopoly. The Reciprocity Treaties of 1876 and 1882, which abolished the tariff on Hawaiian goods, allowed island products to enter the US duty-free; in return, the American government received an important naval base and coaling station at Pearl Harbor on the island of Oahu. While Hawaiian nationalists bristled at the loss of autonomy and the implications for their kingdom's sovereignty, mainland expatriates known as haoles were ecstatic at the prospects for increased profit. It was the beginning of a long and controversial relationship, but one that would be worked to great effect by certain San Francisco-based shippers and their Hawaiian acolytes. In 1882, Adolph Claus Spreckels founded his Oceanic Steamship Company, which inaugurated regular runs between the mainland and the islands.⁹

Spreckels was an iconic figure in nineteenth-century business history.¹⁰ At a time when tycoons were monopolizing the oil, steel, and transportation industries, he made his fortune in a less dignified, but less risky, manner. A German immigrant, Spreckels came to San Francisco and made a fortune as a brewer, supplying quality beer to thirsty miners and those who came in their wake. With his wife and large family, he soon diversified his holdings and purchased land in the Central Valley, growing beets then eventually entering the lucrative sugar market. From there, he branched out to the Hawaiian Islands. Spreckels quickly developed an integrated system wherein he owned several thousand acres of Hawaiian sugar plantations, employed a gang of native laborers, commanded a fleet of ships that transported the crop to the United States, and maintained a profitable sugar refinery in San Francisco. Smaller firms, such as the Planters Line and the Hawaiian Line, faced financial ruin at the hands of the Spreckels conglomerate. Threatened with financial ruin, they soon formed a

7 On *kanaka*, see David Chappell, "Ahab's Boat: Non-European Seamen in Western Ships of Exploration and Commerce," in *Sea Changes: Historicizing the Ocean*, ed. Bernhard Klein and Gesa Mackenthun (New York: Routledge Press, 2004), 75–90. See also David Chappell, *Double Ghosts: Oceanian Voyagers on Euroamerican Ships* (Armonk, NY: M. E. Sharpe, 1997), and David Chappell, "Kru and Kanaka: Participation by African and Pacific Island Sailors in Euroamerican Maritime Frontiers," *International Journal of Maritime History* 6, no. 2 (December 1994): 83–114.

8 David Igler, "Diseased Goods: Global Exchanges in the Eastern Pacific Basin, 1770–1850," *American Historical Review* 109, no. 3 (June 2004): 693–719, quotation on 707.

9 The Oceanic Steamship Company later expanded its operations, establishing service to Australia. Benjamin Wright, *San Francisco's Ocean Commerce: Past and Future* (San Francisco: A. Carlisle and Company, 1911).

10 The standard biography remains Jacob Adler, *Claus Spreckels: The Sugar King in Hawaii* (Honolulu: University of Hawaii Press, 1966). See also William Woodrow Cordray, "Claus Spreckels of California" (PhD diss., University of California at Los Angeles, 1935).

cooperative, the California and Hawaiian Sugar Company, based in the Carquinez Straits community of Crockett. Among the leading firms associated with this entity was the shipping firm of Hind, Rolph and Company. Founded in 1900 by James Rolph and George Hind, the company exchanged Hawaiian sugar for coal and other commodities.¹¹ This San Francisco-based firm developed a reputation for efficiency, but became notorious for operating “hellships” that subjected crewmembers to near-slave conditions on globe-circling voyages.¹² In spite of these conditions, a profitable triangle trade soon developed: lumber was shipped from the Pacific Northwest to Australia and exchanged for coal. The coal was then transshipped to Hawaii, for use in power plants, locomotives, and all sorts of maritime industries, including ships. There, it was exchanged for sugar cane that would ultimately be transported to California. The journey was not without excitement (coal was subject to spontaneous combustion) or enjoyment (oftentimes competing ships’ crews engaged in long-distance races), and represented another link in the chain that joined Victorian San Francisco to a global commercial network. Most of the trade was carried in medium-sized sailing craft (typically, from 850 to 1,200 tons) that operated out of San Francisco, and which had a reputation for being “smart and fast.”

Much of the raw sugar that came from Hawaii was processed at the California & Hawaiian Sugar Company refinery located in Crockett on the shores of the Carquinez Strait. Originally a flour mill, it served in that capacity from 1888 until 1897. In 1906, it was converted to sugar refining and quickly established itself as the largest such facility in the world, employing 1,700 workers capable of processing 2,250 tons of sugar per day. As Crockett became synonymous with sugar refining, the Matson firm became incontrovertibly linked with the shipment of sugar from Hawaii to the mainland.

William Matson was a Swedish immigrant, born in the auspicious year of 1849, who arrived in San Francisco shortly after the American Civil War.¹³ A skilled mariner, he was hired as a crewman on the personal yacht of sugar magnate Claus Spreckels. Matson quickly rose to captain, ferrying coal from North Bay communities for use in the industrialized quarters of the city. His friendship with Spreckels remained strong, and the elder businessman bankrolled his younger associate’s subsequent maritime ventures. Acquiring a small number of ships, Matson began making regularly scheduled runs from San Francisco to Hawaii, delivering general merchandise to plantation customers and returning with raw sugar for the refineries in Crockett. His first departure out the Golden Gate, aboard Spreckels’s three-masted schooner *Emma Claudina* on April 10, 1882, bound for Hilo ushered in a new era in Pacific coast maritime history. Realizing that the ship was too small, Matson replaced it with a larger brigantine, *Lurline*, owned in partnership with his mentor. The

11 Rolph would serve as mayor of San Francisco from 1906 to 1930, and as governor of California from 1930 until his death four years later. Rolph, who had made a fortune in shipping, lost it there, too, becoming overextended when federal authorities canceled his shipbuilding contract with the French government at the end of World War I, just as the ships were nearing completion. Between 1919 and 1923, Rolph lost \$7 million. James Worthen, “Sunny Jim in the Boiling Cauldron: The Fatal First Year of the Rolph Administration,” *California History* 83, no. 3 (2006): 28–44.

12 For a concise look at this issue, consult Kay Gibson, *Brutality on Trial: “Hellfire” Pederson, “Fighting” Hansen, and the Seaman’s Act of 1915* (Gainesville: University Press of Florida, 2006).

13 The only full-length treatment of Matson remains this hagiographic account: John E. Cushing, *Captain William Matson: From Handy Boy to Ship Owner* (New York: Newcomen Society in America, 1951).

budding business soon developed into a near monopoly on trade between the islands and the mainland.

Matson was an innovator. Despite the fact that he continued to run sailing packets to the islands as late as World War I, he kept a keen eye on new technology, introducing steamers to the fleet in 1902. In addition to his use of new technologies (in 1905, partnership with the Pacific Coast Oil Company led him to install oil-fired boilers in one of his steamers, duplicating technology first adopted by the American-Hawaiian freighters *Nevadan* and *Nebraskan* just three years earlier), he was willing to experiment and think outside the box. Not content with simply shuttling sugar and general cargo back and forth from Hawaii to the mainland, he diversified, and after 1901, many of his ships featured stately cabins in which passengers could while away the voyage to Honolulu. *Lurline II* (1908) had accommodations for 51; *Wilhelmina* (1910) could take 146. In the years that followed, Matson added newer and larger ships to his fleet, which became more passenger than freight oriented: *Malolo* (1927) could accommodate 690, and *Mariposa* (1931), *Monterey* (1931), and *Lurline III* (1932) a like number. To handle the growing volume of passengers, Matson acquired the Moana Hotel and built the Royal Hawaiian Hotel on Waikiki. Until the advent of transpacific air travel in the 1950s and 1960s, Matson virtually monopolized the passenger trade to Hawaii, serving as a de facto arm of the local tourist industry.

In addition to island trade, a robust business in trade linked San Francisco to other American ports. While lumber was the most common and most remunerative of coastal cargoes, the relative lack of any overland transportation network necessitated that general goods and cargo be delivered by maritime means. Items as diverse as agricultural goods, building supplies, manufactured items, and fine luxury goods traveled from all points along the Pacific coast to San Francisco, often returning with various goods produced there, or transshipped from other locales. A report issued in the mid-1860s attests to the volume of trade along the coast: 122 sloops, totaling 2,619 tons (for an average of 21.39 tons), could be counted at any given time, though these were most likely used almost exclusively for inland passages. The schooners were the workhorses of the coastal trade. Between 1850 and 1905, 182 two-masted, 112 three-masted, and 130 four-masted schooners were built on the Pacific coast. Cheap to build, easy to operate and maintain, and relatively nimble and quick—the sailing schooner *Sadie* made the 900-mile trip from San Pedro to Gardiner, Oregon, in about 80 hours, for example—they were the preferred cargo carriers of their day. In one season, 291 sparsely manned schooners (averaging 55.8 tons) participated in the coastwise trade, hauling lumber, shells, brick, and virtually any other commodity required by the denizens of industrial, urban California.¹⁴ While sailing schooners dominated, by the mid-1880s, steam schooners such as Charles G. White's *Surprise* were encountered along the coast.

Coasting vessels provided contact with minor ports that otherwise were out of touch with the rest of the world until the advent of the automobile and paved highways. Indeed, travel and cargo transport up and down the coast were practical only by sea, and ubiquitous lumber schooners were often pressed into service to deliver passengers and varied cargoes to isolated northwest coves. They also linked the major cities of California. In the north, lumber schooners often picked up cargoes other than those they intended to deliver: food-stuffs like apples, potatoes, and prunes were commonly found on cargo manifests.

14 "Harbor Master's Report," *San Francisco Municipal Report for 1864–1865*, Cited in Martin, *Sail and Steam on the Northern California Coast*, 46.

Coastal operations increased after the gold rush as San Francisco became a major entrepôt and the economic hub of the region stretching from San Diego to Alaska. The city increasingly became the railroad and maritime center of the Pacific coast. One contemporary mentioned:

The city of San Francisco itself, with its magnificent land-locked harbor and central position, it may be that the scarcity of harbors on this coast is more beneficial than otherwise. Everything centers here. She has no real rivals in her commercial relations, and whatever other ports there are all pay her tribute. The coasting voyages both north and south begin and end here. The lumber, grain, wool, and other produce is shipped to us for sale and reshipment, and every little chute, roadstead, or landing sends its products to and receives its supplies from San Francisco, dealing with no other place and having no other connections.¹⁵

In those days, a traveler from any point along the coast between the Mexican and Canadian borders simply asked for a ticket to “the city” with complete assurance that they would be routed to San Francisco. Likewise, cities around San Francisco advanced to become maritime and manufacturing centers.

In a relationship not much different from the mercantilism that had dominated California under the Spanish and Mexicans, a system developed whereby San Francisco provided capital, entrepreneurial vision, and finished products to a vast hinterland that supplied the metropole with customers, raw materials, and at times, a pliable workforce. San Francisco became the metropolis of the Pacific coast, and the economic hub of the entire region from San Diego to Alaska. As the city became a center of commerce and finance, some of the capital accumulated there was invested in sailing trades, including the ownership of vessels trading to the South Seas.¹⁶ Other small packets, originally brigs and brigantines—but eventually steamers operated by the Oceanic Steamship Company (a Spreckels subsidiary founded in 1883)—linked San Francisco to Pacific islands other than Hawaii, bringing mail, passengers, and sundry cargoes on round-trip voyages averaging a sprightly three months.¹⁷

In addition to the building supplies and materials associated with the lumber trade, agricultural products, and assorted general cargo, San Francisco needed fuel for their various enterprises. Before the general use of oil for fuel on the Pacific coast, vast quantities of coal were imported from the mines of the Pacific Northwest, the American East Coast, and abroad. Good-quality coal averaged \$20 per ton in the 1850s, dropping to \$11 during the following decade. As a result, a regular coast trade was established between Puget Sound and San Francisco; despite its notoriously poor quality, coal production in Vancouver rose sharply in the late nineteenth century from 400,000 tons to more than a million. The local coal was of such poor quality—one contemporary characterized it as “dirt that sometimes burns”—that the reliance on Pacific Northwest, Australian, or other imported varieties is

15 January 1879 Supplement to the *San Francisco Journal of Commerce*, cited in Martin, *Sail and Steam on the Northern California Coast*, 52.

16 An indispensable look at these issues is offered by Gray Brechin, *Imperial San Francisco: Urban Power, Earthly Ruin* (Berkeley: University of California Press, 1999).

17 The record for fastest transit by sailing ship between San Francisco and Hawaii (and Papeete) was long held by the general cargo carriers produced by Matthew Turner. See Diane Cooper, “Surveying the Pacific: the Voyages of the *Galilee*,” *Mains’l Haul; A Journal of Pacific Maritime History* 34, no. 1 (1998): 36–45.

easily understood. Indeed, after lumber, coal was the second-largest output from the Pacific Northwest, and much of this cargo was carried in New England–built square-riggers. With little to no premium on speed, the tried-and-true medium of coal transport was the sailing coaster. To serve this need, in the 1870s and 1880s, a number of Downeasters were sold to San Francisco firms for the trade between that city and Cape Flattery, and regular Cape Horners were known to make a voyage or two between the Golden Gate and Puget Sound or British Columbia while waiting for a grain charter to Liverpool.¹⁸

British ships that carried grain from San Francisco to Liverpool routinely arrived with coal, which was in demand in California and which was the only raw material that the United Kingdom was in a position to export to this country. An important triangular trade developed whereby British manufactured items (including iron and chemicals) made their way to Australasia, where it was exchanged for Australian coal, eventually making it to San Francisco in a globe-girdling voyage that took the better part of a year. In 1891, there were 107 sailing ship arrivals of coal in San Francisco; as late as 1908, there were still 56 such arrivals. Throughout the period, cargoes of manufactured goods routinely arrived atop a hold of coal.¹⁹

The importance of coal can be seen in the diverse vessels that brought it to San Francisco. In addition to Downeasters and grain ships, colliers counted among their number clipper ships such as *Dashing Wave* (which enjoyed a reputation as the fastest coal ship on the Pacific) and Donald McKay's *Glory of the Seas* (which served as a collier for seventeen years) resigned to hauling cargo significantly less fashionable than those they had carried during their heyday.²⁰ Bulky, low-revenue commodities attracted ships designed more with an eye to cargo capacity and economy of operation. As one observer noted, "the winds serve the vessels cheaper than the coal does the engine, and canvas yet retains its supremacy over iron in the carrying trade in this part of the world."²¹ Clippers were not the only vessels engaged in the trade, and as efficiencies improved, steamers entered the fray. Ships from the Saginaw Steel Steamship Company carried 3,500 to 4,000 tons of coal at eleven knots, often completing three round-trips per month and earning about \$20,000 gross per month.²²

While the maritime implications of the coal trade were obvious, it was destined to be eclipsed by a new source of energy and fuel. With Edwin Drake's discovery of oil at Titusville, Pennsylvania, in 1859, the stage was set for coal and whale oil illuminants to bow to petroleum. California wells began flowing in the 1870s, but within a short period, the state consumed more oil than it produced; the 4.1 million gallons produced in 1881, was four times more than the previous year, but it still fell behind local demand. During this early period, petroleum shipping along the coast initially involved little more than moving kerosene from the handful of small refineries that drew upon the seepage in southern California fields. While tankers are now the standard petroleum carriers, this was not always the case. In the

18 L. E. Fredman, "Coals from Newcastle; Aspects of the Trade with California," *Australian Journal of Politics and History* 29, no. 3 (December 1983): 440–47.

19 See Robert Carter, *Windjammers: The Final Story* (Dural, NSW: Rosenberg Publishing Company, 2004).

20 Giles T. Brown, *Ships that Sail No More: Maritime Transport from San Diego to Puget Sound* (Lexington: University of Kentucky Press, 1966).

21 *San Francisco Journal of Commerce*, cited in Martin, *Sail and Steam on the Northern California Coast*, 52.

22 Francis G. Jenkins, "The Saginaw Steel Steamship Company and its Steamers," *American Neptune* 42 (1982): 245–75.

early years of the oil trade, Downeasters found ready cargoes in case oil, so named because it was shipped in wooden crates containing a pair of five-gallon tins of kerosene. For the better part of two decades, Downeasters carried three to four million barrels of oil annually to Asia and Oceania, reaching a peak of seven million barrels by World War I.

Many predicted that the lack of coal deposits would limit California's oil production and that the state could never surpass more established petroleum producers like Pennsylvania. These prognosticators could not have been more wrong. By 1890, the state produced 303,360 barrels, and within two years of that date, Edward Doheny operated the first oil well within the city limits of Los Angeles. A petulant city council forced him to curtail his operations after the ruin of the district for residential purposes. This stimulated a search for alternative fields within the state, and soon, to the shock and delight of earlier naysayers, California was producing a quarter of the world's supply of "illuminating oil," or kerosene. Between 1890 and 1898, oil production increased by 1,400 percent, growing a further 750 percent in the following half decade. Greater levels of production led to changes in the ships that handled the product. Production levels of 4 million barrels in 1900 climbed to 77 million barrels just a decade later, and much of this crude oil was refined and processed at Richmond in San Francisco Bay. The cargo was delivered mainly via barge or sailing craft, though in 1903, the steamer *Whittier*, with a capacity of 20,000 tons of crude oil, ushered in the age of petroleum tankers on the West Coast. By 1911, California produced 63 percent of the nation's petroleum, becoming the world's greatest oil-producing region.²³ Production grew steadily until it hit 100 million barrels during World War I, before leveling off at 300 million barrels in the late 1920s (following the discovery of lucrative fields at Huntington Beach, Santa Fe Springs, and Signal Hill Field [Long Beach] in the early years of that decade). Even by that relatively late date, most shipments went by barge or sailing vessel (including the museum ship *Falls of Clyde*).

Examples of the types of ships engaged in the petroleum trade are found in the records of the Anglo-American Oil Company. A subsidiary of Standard Oil, this British firm ordered ships in pairs from the Sewall Shipyard of Maine. These steel carriers weighed over 3,000 tons gross and were to be used for the long routes from the Atlantic Seaboard to the Orient. Rivaling anything afloat under the British, German, or French flags in carrying capacity, they were well suited to the long passage through the Atlantic, Indian, and western Pacific Oceans.

Among the most notable of the Sewall creations were a trio of four-masted barks built for Standard Oil: *Astral*, *Acme*, and *Atlas*.²⁴ Entering the age of steel construction when steam was replacing sail was a venture that the Standard Oil Company felt sure was a profitable business to serve the Far East case oil trade. American navigation laws ensured reasonably full employment, and favorable cargo protection laws to employ US-flagged ships were a positive inducement to the trade. Thus the large shipments of case oil from New York and Baltimore to Japan, China, and the Philippines were guaranteed cargoes outward. Homeward bound there was Hawaiian sugar, and frequently domestic coal cargoes from the East Coast to US Navy coaling ports. *Acme* was thus employed from her

23 Among the craft associated with this trade was the tug *Hercules*, now a museum ship berthed at the Hyde Street Pier in San Francisco. An oceangoing tug, *Hercules* towed oil barges along the California coast from 1908 through 1910.

24 These were among only a dozen iron or steel square-riggers ever built in the United States.

launching in 1901 for a dozen years, trampling around the world. In 1913, she was sold to the Alaska Packers Association, joining her sisters in the Alaska cannery trade. That year, she was renamed *Star of Poland* and given a major overhaul in Alameda, with living quarters for Chinese cannery workers and San Francisco fishermen. *Star of Poland* made four trips to Alaska; at the beginning of each season she went to Nanaimo, British Columbia, for coal, and returned to San Francisco to distribute it to the other ships. She subsequently was chartered to load a full cargo of lumber in Puget Sound for Australia, followed by wheat to Callao, and finally, nitrate to San Francisco. Wartime freight rates increased and the ship was then chartered through Struthers and Dixon (in San Francisco) to the US Shipping Board to carry general cargo to Manila. Partly loaded with general cargo for San Francisco, she departed Manila in August. She wrecked along the Japanese coast on September 15, 1918, a total loss. The Alaska Packers were paid in excess of \$350,000 by the US government for the loss of the ship.²⁵

Passenger trade between two American ports was not restricted to those who traveled on Matson liners from San Francisco to Hawaii. Vessels associated with the Pacific Mail Steamship Company (and its competitors) provided the principal link between the city and the Atlantic coast through the Civil War. Passengers arriving via this medium commented on the good food, favorable accommodations, and speed of transit, a holy trinity for transcontinental passengers until the arrival of the railroad in 1869. Even when the Transcontinental Railroad (1869) and its feeder lines cut into this monopoly, passenger service between San Francisco and other California and West Coast ports remained important—and in some places paramount—until the advent of automobiles and freeways in the twentieth century. The most notable players in coastal operations were the Pacific Coast Steamship Company and the Admiral Line, which integrated outlying areas into a nexus of trade that began and ended in San Francisco. Lumber carriers, as we have seen, were outfitted with passenger accommodations, particularly after the application of steam technology made travel somewhat more accessible. Liners also linked the various cities of California. Probably one of the most important events of the 1890s—and one whose potentialities were most clearly recognized at the time—was the successful conclusion of Los Angeles's long fight to obtain an appropriation for the construction of a deepwater harbor at San Pedro. The harbor at Wilmington (connected to Los Angeles by rail in 1869) became a major transshipment point for items such as wheat, wine, fruit, and other agricultural products, particularly in the 1870s, after the federal government made small improvements to the harbor.

With these improvements, reliable passenger operations could be developed. Sporadic service became more regularized in the years before World War I, and was dominated by the Pacific Coast Steamship Company and the Pacific Mail Steamship Company. Beginning in 1863, Ben Holliday, the self-proclaimed "Stagecoach King" organized the California, Oregon, and Mexico Steamship Company, which he later restructured as the North Pacific Transportation Company.²⁶ It established a network of coastal lines stitching together ports from Alaska to Mexico, only to collapse with the rest of Holliday's transportation empire in 1876. Its ships and lines would be taken up by Goodall, Nelson, and Perkins (later incorporated as the Pacific Coast Steamship Company) where they would eventually incor-

25 Harold Huycke, "Star Fleet" *Yachting*, February 1960, 1–5.

26 In 1866, Holliday sold his stagecoach operations to Wells Fargo and Company.

porate some twenty different West Coast ports until that entity's collapse.²⁷ Later arrivals included the San Francisco and Portland Steamship Company (known as "the big three" for the number of vessels it operated), the Great Northern Pacific Steamship Company (which linked Portland and Los Angeles), and H. F. Alexander's Admiral Line.²⁸ From 1910, Admiral Line began operating a pair of vessels, the turbinized *Harvard* and *Yale*, which made the run from Los Angeles to San Francisco in nineteen hours, a savings of five hours over the competition. Beginning in 1921, the liners connected San Francisco to Los Angeles with four-times-a-week service. They also coordinated their sailings with various rail lines and streetcars, ushering in a system of commuter intermodalism. The *San Francisco Chronicle* noted that the development "will revolutionize coastwise passenger traffic."²⁹ Despite luxurious accommodations and travel times that rivaled railcars, the fares were modest: \$8.35 for the Los Angeles to San Francisco leg, with an additional \$2.00 for service to San Diego. Rooms ranged from \$1.00 to \$8.00 with meals available for an additional \$1.00. Departing the Golden Gate at 4:20 p.m., the luxurious vessels arrived at 10:00 the following morning, and were ready for the reverse trip in just six-and-a-half hours.³⁰ Other entrepreneurs, such as those associated with the Pacific Coast Steamship Company, extended service to San Diego and Seattle, connecting to those ports via San Francisco and San Pedro, and were soon joined by rivals such as the Southern Pacific.

Admiral Line maintained its operations until 1918, when both *Harvard* and *Yale* were requisitioned by the government to serve as troopships during World War I. Even while serving in Europe they maintained a close connection to California, as seen in a letter the crew of *Yale* sent to the "to the people of San Francisco": "We are proud to say that we are a California ship and a California crew, composed mostly of boys from San Francisco and vicinity, and when it is all over over here we are coming back to the city of the Golden Gate which we all love so well. So dear friends, kindly keep a spot in your hearts warm for us."³¹

After the conflict, both vessels returned to the West Coast passenger trade, this time in the service of the Los Angeles Steamship Company (LASSCO).³² Burning oil after their conversion from naval use, the twin ships set speed records for their new owners, averaging over twenty-four knots on some of their early runs, albeit at rates that were nearly double their prewar standards. The increased rates, coupled with the loss of *Harvard* in 1931 and the increasing encroachment of automobile traffic in the 1930s signaled the end of an era for coastwise passenger trade.

27 The Pacific Coast Steamship Company was established by Goodall and Perkins in 1877. It lasted until 1916, when it was bought out by H. F. Alexander and reorganized as the Pacific Steamship Company, whose operations lasted until 1936. By the First World War, the lines operated by the Central Pacific and Union Pacific Railroads had made serious inroads into passenger travel and effectively dominated all competition on this route by the 1930s.

28 The Big 3 was a subsidiary of Union Pacific, transporting passengers—some 55,000 per annum by 1915—and freight to San Francisco.

29 *San Francisco Chronicle*, December 21, 1910.

30 Each vessel carried 565 passengers and averaged nearly 25 knots during the voyage. For more on these vessels, see George F. Gruner, *The White Flyers, Harvard and Yale: American Coastwise Travel* (San Francisco: Associates of the National Maritime Museum Library, 2002).

31 *San Francisco Chronicle*, December 22, 1918.

32 LASSCO expanded operations to Hawaii, but was unsuccessful in its competition with Matson. In 1931, it was acquired by its rival, though it operated as a subsidiary until 1937. Martin Cox and Gordon Ghareeb, *Hollywood to Honolulu: The Los Angeles Steamship Company* (Palo Alto, CA: Glencannon Press, 2009). Admiral Lines remained in business until 1936 when it became a victim of the Great Depression.

While the passenger trade was a major component of coastal operations, the real impact of such traffic would be seen in international immigration, a topic covered in the next chapter. Nonetheless, the intercoastal trade was a major component of maritime California in the years between 1914 and 1950, and vessels engaged in such trade constituted a sizable percentage of all clearances. This trade has virtually ceased to exist today.

Lightship Relief

The sheer volume of trade along the California coast served as an impetus for the development and maintenance of various aids to navigation. The Lightship Relief (WLV 605) currently berthed at Oakland's Jack London Square, adjacent to the former presidential yacht Potomac, is an excellent example of how the government addressed the hazards of navigating California's waterways. In places where lighthouse construction was impractical (owing to cost, location, current, or other factors) lightships were utilized to assist mariners along treacherous coasts. From 1820 until the 1980s, some 170 lightships served as floating lighthouses, marking shallow river crossings, offshore hazards, reefs, and other obstructions. Lightships employed visible, audio, and radio signals to warn unsuspecting mariners of hidden dangers, and remained in place through the most severe weather conditions imaginable. Most of these vessels were constructed and maintained by the US Lighthouse Service (1789–1939), with a small number contributed by the Coast Guard after that agency absorbed the former. Built at the Rice Brothers Shipyard in Boothbay, Maine, in 1950, WLV-605 is one of these.

Entering service off Delaware Bay the following year, she was transferred to Blunt's Reef along the northern California coast in 1960. For the better part of a decade, WLV-605 (then known as Blunt's since lightships took the name of the region where they were stationed) served the Mendocino Coast. By 1969, the vessel was redesignated Relief as testimony to the role she would fill, allowing permanently stationed lightships to return to port while she served as substitute at various locations along the Pacific coast. A relatively small crew (ten to fifteen) served aboard Relief, and welcomed the bimonthly arrival of Coast Guard tenders that brought mail, supplies, fuel, and a fresh contingent of crewmembers.

Relief was decommissioned in 1975, following a quarter century of service. Failed attempts to convert her to a museum ship resulted in her sale to a private individual, who in turn donated the ship to the US Lighthouse Society in 1986. Since that time, she has remained in Oakland, where she underwent extensive restoration, including a stint in local dry-docks. One of only two lightships still afloat on the West Coast, Relief was designated a National Historic Landmark in 1990.



The trade and transport of sugar was a major feature of California's maritime economy. Here, an unidentified four-masted bark is seen at the California and Hawaiian Sugar refinery in Crockett.



Courtesy San Francisco Maritime National Historical Park. L. Korbell Collection.B1.789.

Pacific Mail steamer *Golden City*, built in 1867, sails along the California Coast. For generations, Pacific Mail was the leading maritime entity along the entire coast, with a major presence in the San Francisco Bay Area.



Courtesy San Francisco Maritime National Historical Park, B7.4942n1.

Lumber schooners *C. A. Thayer* and *Wapama* at rest in San Francisco. The two historic vessels represent different stages in the lumber trade, the single-most important activity for maritime San Francisco in the late nineteenth century.



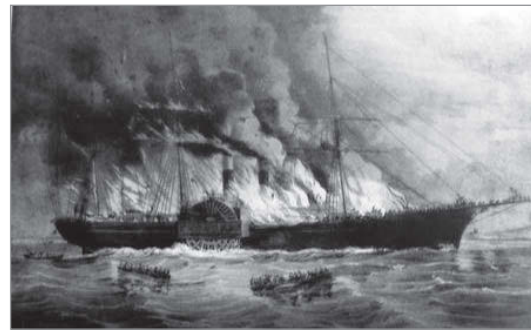
Courtesy San Francisco Maritime National Historical Park, A11.20341.

Steam schooner *Little Jewel* beating along the California coast. Vessels such as this often transported passengers and general cargo along the coast in addition to their complement of lumber.



Courtesy San Francisco Maritime National Historical Park. B7.14, 510n.

Beginning in the 1850s, passenger service along the Pacific coast linked distant communities. The side-wheeler *Columbia* united San Francisco with Portland, while the steam tug *Golia* did the same for the former and San Diego. Regrettably, many of these ships were past their prime, a factor that led to an inordinate number of explosions and sinkings. Even newer craft were susceptible to disaster. Here, Pacific Mail steamer *Golden Gate* is seen aflame off the coast of Mexico in 1862 in a hand-colored print by N. Currier.



Courtesy of Stephen J. and Jeremy W. Potash Collection. Copyright Stephen J. and Jeremy W. Potash (Steve@Potashco.com).

Steam schooner *Wapama* in her current condition. The last of a historic fleet of steam schooners, she was long part of the historic vessels maintained by the San Francisco Maritime National Historical Park. She currently awaits disposal in Richmond, California.



Photo courtesy Paul Judge.

Steam schooner *Speedwell*. With a full load of lumber that totals some two million board feet, and accommodations for forty, she was nothing if not efficient.

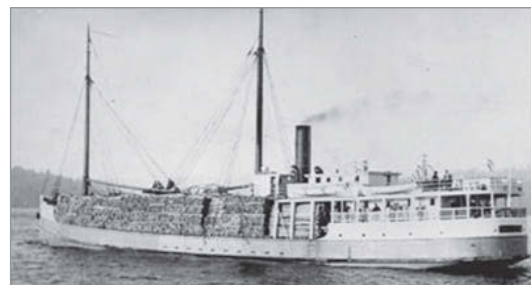


Photo courtesy Steve Priske.
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CHAPTER 10

DEEPWATER SAILING: IMMIGRANTS, PASSENGERS, AND FOREIGN TRADE

International commerce is a defining feature of the modern economy. Today, more than 95 percent of America's foreign trade (by volume) arrives via ship. This is not just a recent phenomenon. While trade between California and other parts of the globe was not always as important as it is today, and although it often lagged behind the value and contributions afforded to coastal commerce, it was neither unimportant nor statistically insignificant. Indeed, deepwater trade is a major component of California's past that must be addressed if we are to take a comprehensive look at the region's maritime history.

Direct and continuous contact with other parts of the globe transformed San Francisco into a cosmopolitan city with a diverse population and access to international culture. Maritime links brought immigrants to this country from places that could never be supplied by overland routes. Among the most important aspects of California's foreign maritime connections have been the grain trade (already discussed), passenger and immigrant trade, and the linking of California to Asian and Pacific island markets. This chapter investigates these disparate strands.

While commercial relations between California and other parts of the globe existed prior to 1850, they expanded tremendously afterward. Throughout the nineteenth century, the relaxing of mercantilist proscriptions that had been in place since the time of Cortés opened West Coast ports to the ships of all nations. Under Spanish suzerainty, illicit commerce centered on the rich natural resources offered to whalers and furriers. During the quarter century of Mexican rule, Californios welcomed East Coast vessels bringing manufactured items in exchange for locally produced hides and tallow. This growing international trade remained small but brisk until the gold rush and its influx of Argonauts transformed West Coast harbors into international ports-of-call.

The international dimensions of the California gold rush have been well documented and need not be repeated here. The gold rush fleet was composed of countless vessels from innumerable countries and immigrants from every corner of the globe flocked to California. Craft from Europe, Asia, South America, and Australia sailed alongside those from New York, Boston, Savannah, and New Orleans. Likewise, the grain trade, largely controlled by British interests but counting French, German, and other participants among their number (and employing various South American trade partners involved in the guano and nitrate trades), was a major factor in converting San Francisco and the state it dominated into important hubs for foreign traffic.¹ But it was Asia that was most important for American businessmen at this time. The prospect of trade with the seemingly inexhaustible markets of the so-called Celestial Kingdom dominated the minds of American businessmen. The advent of steam technology, widespread by the 1860s, led to increased trade with the region. It also

1 Guano imports to the United States grew tenfold in the decade between 1850 and 1860, by which time San Francisco was processing more than 140,000 tons per annum, good enough for tenth most in the nation. *Commerce and Navigation*, Report of the Secretary of the Treasury for the Year Ending 30 June 1850 (Washington, DC: Gideon and Company, 1851), 148; and *Commerce and Navigation*, Report of the Secretary of the Treasury for the year ending 30 June 1861 (Washington: GPO, 1861), 1:230, 392.

led to vastly increased immigration from China and other parts of the Orient, a trend of tremendous influence that forever changed the nature and composition of California society.

Although Asian immigration to the American West occurred before the middle of the nineteenth century, large-scale movement of people from China and other Pacific nations to California was limited until the marine engine was perfected in the 1860s.² In the early days of steam technology, inefficient power plants, subject to the corrosive effect of scaling (caused by the buildup of saltwater in the condensers and engines) coupled with massively inefficient uses of fuel (voyages required tons of coal and hundreds of cords of wood) made transpacific steamer voyages prohibitively expensive, if not downright impossible. In 1862, as the East Coast was deeply involved in the Civil War, *Cortes* and *Columbia*, the first merchant vessels to steam to Asia from the Pacific coast, set out for Shanghai within three days of one another. Later that same year, the Prussian steamer *Scotland* made the first successful round-trip between San Francisco and Hong Kong, though it should be noted that each of these early ventures was described as “experimental.”³ It took a combination of improved marine technology and the stimulus of federal subsidies to make this a reality.⁴ But these hurdles did not dissuade ingenious entrepreneurs from seeking to tap into the Asian market at an early point.

American contact with China can be traced to the burgeoning trade between the infant United States and that country after 1783.⁵ A search for commodities that would resonate with Chinese consumers took representatives from the United States to the Levant (for opium), Hawaii (for sandalwood), the South Pacific (for bêche-de-mer), the Pacific Northwest (for sea otter furs), and Micronesia (for sea slugs and bird nests, used by culinary artisans). Merchants returned from China with tea, silks, porcelain, and other conspicuous consumables, which allowed citizens of the newly independent United States to show their status; rarely, they brought passengers, the majority of whom were students or diplomatic officials sent to experience foreign cultures firsthand.⁶ According to contemporary reports, the first Chinese to arrive in American California—two men and a woman—did so aboard the brig *Eagle* from Hong Kong in February 1848. By the following year, the number of Chinese had grown to 55. All this would change with the discovery of gold. By January 1850, there were 789 Chinese men and a pair of Chinese women in California; a year later, there were 4,018 men and 7 women. The trickle had become a deluge. An unscientific census

2 Raymond L. Cohn, “The Transition from Sail to Steam in Immigration to the United States,” in *Maritime Aspects of Migration*, ed. by Klaus Friedland (Koln: BohlauVerlag, 1989). See also W. C. Banner, “A History of Trans-Pacific Service,” *Japan: Magazine of Overseas Travel* 16, no. 5 (1927): 7–12.

3 E. Mowbray Tate, *Transpacific Steam: The Story of Steam Navigation from the Pacific Coast of North America to the Far East and the Antipodes, 1867–1941* (New York: Cornwall Books, 1986), 23.

4 Some steam-powered vessels crossed the Pacific, obviously, but always with the assistance of a full complement of sails. Contemporary accounts can be found in Thomas Rainey, *Ocean Steam Navigation and the Ocean Post* (New York: D. Appleton and Company, 1858); and Charles Beebe Stuart, *Naval and Mail Steamers of the United States* (New York: Charles B. Morton, 1853).

5 See Mary A. Y. Gallagher, “Charting a New Course for the China Trade: The Late Eighteenth Century American Model,” in *The Early Republic and the Sea: Essays on the Naval and Maritime History of the Early United States*, ed. William S. Dudley and Michael J. Crawford (Washington, DC: Brassey’s Press, 2001). See also E. Mowbray Tate, “American Merchant and Naval Contacts with China, 1784–1850,” *American Neptune* (July 1971): 177–91; and Robert Schwendinger, “Bibles and Opium: China’s Early Trade,” *Oceans* (May 1978): 21–27.

6 See Thomas N. Layton, *The Voyage of the Frolic: New England Merchants and the Opium Trade* (Stanford, CA: Stanford University Press, 1997), and Thomas N. Layton, *Gifts from the Celestial Kingdom: A Shipwrecked Cargo for Gold Rush California* (Stanford, CA: Stanford University Press, 2002).

placed the number at 11,787 (of whom all but 7 were male) by May 1852.⁷ Following the arrival of nearly 800 Chinese aboard *The Lord Warriston*, one correspondent (“Peregrine Pilgrim”) linked the disruptive nature of Chinese immigration to shipping companies:

There is another object to be gained by the course of masterful inactivity—a great, a detestable, and a damnable object—and it is commerce. By allowing innumerable hordes of semi-human Asiatics to come to our shores, the trade with Asia will be increased; there will be an increased demand for shipping; the ship owners will make larger dividends; the trade and profits of many large commercial houses will be increased, and the general interests of commerce will be promoted. This is the direct and moving influence that shuts up the mouths of the press and stifles legislation.⁸

Despite the fears of xenophobic Californians, Chinese continued to arrive on the shores of the Golden State in impressive numbers. By 1866, approximately 105,000 Chinese had paid \$40–\$50 each for the two-month journey to California, and in the decade and a half following the gold rush, more than \$7 million was collected in fares from emigrants alone.⁹ These numbers increased due to the development of and advancements in steam propulsion. By 1867, Congress appropriated half a million dollars to Pacific Mail to operate steamer service from San Francisco to Hong Kong, requiring twelve annual round-trip voyages. The coming of steam navigation made transpacific voyages affordable and profitable. Indeed, although San Francisco had become a great international port with the gold rush, it catapulted to new heights at about the same time the steamship became economically and mechanically suitable for long, transoceanic routes, making the two processes virtually synonymous and coterminous.¹⁰ Not coincidentally, at the same time transcontinental railroads cut into the profit margins of Pacific Mail steamers, that company began looking for new markets since dwindling passenger traffic and the absence of mail contracts made failure a very real possibility.

After Pacific Mail’s vessels demonstrated the utility of steam passenger transportation on the Panama run, it was not long before they branched out across the Pacific.¹¹ Indeed, it was a veteran of the Panama route (though not a Pacific Mail vessel) that first proved the utility of such a venture, when *Monumental City* steamed from San Francisco to Australia in 1867.¹² Many saw immense benefit in the prospects for increased trade. One local newspaper opined, “If China will send us the needed labor and cultivate a trade with us, in a few years we shall be able to do for them what England, nor Russia, nor France can ever do—send

7 *Daily Alta California*, May 15, 1852.

8 *Daily Alta California*, July 29, 1853. Later, others surmised that a close relationship between shipping companies and the press silenced reports that would be injurious to the company’s bottom line. *Life, Diary and Letters of Oscar Lovell Shafter*, ed. Flora Haines Apponyi Loughhead (San Francisco: The Blair-Murdock Company, 1915).

9 Robert Schwendinger, *Ocean of Bitter Dreams: Maritime Relations between China and the United States, 1850–1915* (Tucson, AZ: Westernlore Press, 1988).

10 E. Mowbray Tate, *Transpacific Steam: The Story of Steam Navigation from the Pacific Coast of North America to the Far East and the Antipodes, 1867–1941* (New York: Cornwall Books, 1986).

11 John Haskell Kemble, *Sidewheelers across the Pacific* (San Francisco: Museum of Science and History 1942). See also Edward R. Gundelfinger, “The Pacific Mail Steamship Company, 1847–1917” (Master’s Thesis, University of California, Berkeley, 1917).

12 She was destined for use in the Australian coastal trade, with regular service between Sydney and Melbourne.

their starving people cheap bread and make famine impossible.”¹³ Inspired, Pacific Mail ordered four gigantic wooden side-wheel steamers, *America*, *China*, *Great Republic*, and *Japan*, to fulfill their 1865 mail contract. Costing \$1 million each and averaging 360 feet and 4,352 tons, they were the largest wooden steamships found anywhere in the world, and based overwhelmingly on passenger traffic. Accommodations for nearly 1,500 passengers and a crew of 120 were impressive, but these ships were already obsolete by the time they were christened, since shippers elsewhere were shifting to iron hulls and screw propellers.¹⁴ Considerable quantities of coal had to be bunkered aboard the ships, ranging from 3,800 to 4,500 tons, since there were no facilities along the 5,200-mile transpacific route at which they could take on supplies or provisions. Sails on three towering masts augmented engines that drove a forty-five-foot paddlewheel.¹⁵ When the newly ordered *China* was unavailable to inaugurate this service, a veteran of the Panama run was reconditioned and pressed into service.¹⁶ The 340-foot, 3,700 ton *Colorado* was the first: departing the Golden Gate on New Year’s Day, she reached Yokohama on January 24, and Hong Kong six days later. Before World War I, she inaugurated 1,200 round-trip journeys between the Golden Gate and Asia.¹⁷ Bunkers held 1,500 tons of coal for the trek, which the 1,800-horsepower walking beam engines used at an average of 45 tons daily. This combination of freshly painted wooden ships, combustible materials, and massive boilers made for an ecology of disaster. Even though Pacific Mail had a reputation for well-drilled crews, disasters sometimes occurred, as on December 17, 1874, when *Japan* was lost with 415 souls en route from Yokohama to Hong Kong.¹⁸

Despite the dangers and discomfort associated with the trip, Pacific Mail had no problem recruiting passengers from Asia. *America*, for example, delivered over 700 immigrants on its inaugural San Francisco run. Before passage of the Chinese Exclusion Act, the number of Chinese passengers averaged 1,000 on each eastbound crossing and exceeded 1,400 on some passages, far in excess of the legal limit for such journeys. First-class passengers, regaled with opulent and lavish entertainments, shelled out as much \$300 for passage to Hong Kong. Chinese merchants acted as agents, earning a commission for every passenger they brought to the company.¹⁹ Chinese steerage immigrants, eschewing the stately

13 *Daily Alta California*, December 31, 1866.

14 By this time, American manufacturers were not yet capable of matching their British counterparts in producing iron screw hulls, but by 1870, the Delaware River yards had caught up to their European rivals. Even at that time, Pacific Mail was hesitant to adopt the new technology, despite its reputation for greater efficiency, since the flexibility of their ships’ hulls would not allow for the use of an internal propeller shaft. Inevitably and inexorably, Pacific Mail adopted iron hulls, screw propellers, and compound engines once other shippers had proven them successful.

15 The sails were sometimes needed, as was the case for *Great Republic* on her third voyage, when a broken shaft hobbled the craft some 1,400 miles from Yokohama.

16 Retrofitting included the addition of an extra mast and a rigid strengthening around the waterline to protect against the beating of Pacific storms. She was skippered by Captain George Bradbury. Pacific Mail Steamship Company Papers (Mail and Passengers), mss, Henry E. Huntington Library, San Marino, CA.

17 Pacific Mail subsequently established service to Shanghai via Kobe and Nagasaki, using the vessels *Costa Rica*, *Golden Age*, *Ariel*, *New York*, *Oregonian*, and *Nevada*.

18 *America* burned under suspicious circumstances at Yokohama in 1872 and *Grand Republic* sank off the Columbia River in 1879. Only *China* survived, continuing transpacific operations until she was broken up at Tiburon in 1886. Likewise, transpacific steamer *Oceanic*—carrying 192 passengers in excess of its allotment—collided with a coastwise steamer in San Francisco Bay in 1888, and on February 22, 1902, the *Rio de Janeiro* was lost in the same waters, near Fort Point, with the loss of 131 passengers and crew.

19 Pacific Mail Steamship Company, Commissions Paid to Chinese Merchants, mss., Huntington Library.

first-class cabins for more Spartan accommodations, paid \$40 per head for the return journey to America. The fares did little to offset the high cost of operations (but for its mail contract, the company would have lost money routinely), and profits were unsecure and often nonexistent.²⁰

Faced with the reality of the situation, and motivated by federal subsidies, Pacific Mail abandoned its wooden side-wheelers in favor of iron-hulled screw propellers.²¹ In 1874, they contracted with John Roach & Sons of Chester, Pennsylvania, for the 5,100-ton iron screw steamers *City of Peking* and *City of Tokio*.²² At over 5,000 tons and measuring 423 feet long with a beam of 48 feet, they were the largest ships in the American fleet.²³ By that time, Pacific Mail operated forty ships on runs to as many Pacific ports; within two decades, competition with other lines and racist legislation halved its fleet.

Pacific Mail's dock (opened on the Brannan Street wharf) represented the nexus of the largest and most important West Coast steamship lines, where cargo and passengers were routinely loaded and unloaded into detention facilities and adjoining warehouses.²⁴ Nearly all the newcomers departed from the southern Chinese port of Guangzhou (formerly Canton), and almost all were male. Their identifiable differences, "strange" customs, and foreign habits made them easy targets for violence and racist legislation. Taxed out of the mines, they took employment wherever they could find it, including as laborers on the trans-continental railroad or in the shrimp fishery. When forced from even these occupations, many Chinese sought jobs in restaurants and laundry facilities, among the few niche occupations still open to them. Still others returned to Asia.

One potential form of employment open to Chinese was to crew aboard transpacific vessels. Pacific Mail's service relied on Chinese crewmen, though officers' billets open only to Caucasians.²⁵ Hiring from 80 to 120 Chinese seamen, stewards, and engine-room attendants in Hong Kong for each voyage saved the company substantial sums of money, but drew the ire of maritime union members who felt these jobs rightfully belonged to Americans.²⁶ While cannery owners and operators might argue for more cheap Chinese laborers, working-class whites on the West Coast often viewed the Chinese as competitors, which created

20 John Haskell Kemble, "A Hundred Years of Pacific Mail." *American Neptune* 10 (1950): 123–43.

21 The Postal Act of 1872 awarded Pacific Mail a half-million-dollar subsidy, but stipulated the use of iron propeller steamers of 4,000 tons. With their ordered craft unavailable, Pacific Mail chartered the iron steamers *Granada* and *Colima* to fill the gap.

22 *City of Tokio* went ashore on the coast of Japan on June 24, 1885, and was destroyed by a strong typhoon before it could be salvaged. She was replaced by the steamer *Starbuck*, herself wrecked just a few years later. *City of Peking*, by contrast, was uniquely long-lived, making over a hundred successful transpacific round-trip voyages.

23 Later additions included the 345-foot, 3,500-ton *City of Sydney*, *City of Rio de Janeiro*, and *City of New York*. The last met a cruel fate, running aground on the rocks near Point Bonita in late October 1893 and declared a total loss.

24 Dorothy Perkins, "Coming to San Francisco by Steamship, 1906–1908," in *The Chinese American Experience: Papers from the Second National Conference on Chinese American Studies*, ed. Genny Lim (San Francisco: Chinese Historical Society of America, 1980).

25 Robert Schwendinger, "Investigating Chinese Immigrant Ships and Sailors," in Lim, *Chinese American Experience*. Also, Lisa Yun, "Under the Hatches: American Coolie Ships and Nineteenth-Century Narratives of the Pacific Passage," *Amerasia Journal* 28, no. 2 (2002): 38–63; and Robert Schwendinger, "Chinese Sailors: America's Invisible Merchant Marine, 1876–1905," *California History* (Spring 1978): 58–69.

26 The men were hired in gangs, and worked under Chinese foremen, for white officers. The average per-diem cost to feed the men was 14 cents, roughly 80 percent less than what it would cost to sustain a comparable white worker. Pacific Mail Steamship Company, Details of Steamer Expenses, mss., Huntington Library.

serious racial tension. The region became the scene of violent protests, as Caucasians took out their frustrations on Asian newcomers. San Francisco's white-dominated labor community criticized the Chinese for their "bad moral habits, their low grades of development, their filth, their vices, their willing status as slaves," and actively called for their removal from the entire West Coast.²⁷ The idea was prominent enough in California state politics to become a plank in political platforms, as when the Labor Party proclaimed that "we find the presence of the Chinese in our midst as an unmitigated evil, ruinous alike to the people and the state," and called for the abolition of the Pacific Mail Steamship Company's federal subsidy unless it rid itself of Chinese sailors.²⁸ When overtly racist legislation failed to stem or arrest the tide of Chinese immigration, violent mobs attacked the most visible manifestations of immigration.²⁹ In July 1877, several thousand rioters burned and sacked Chinese laundries in San Francisco and set fire to the Pacific Mail Steamship Company docks where immigrants first landed in America. Eventually, immigration from China effectively ended with the Chinese Exclusion Act (1882), though clandestine operations continued to funnel some immigrants to the United States. A detention center at Angel Island further made entrance into American society difficult if not outright impossible.³⁰

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- 27 Alexander Saxton, *The Indispensable Enemy: Labor and the Anti-Chinese Movement in California* (Berkeley: University of California Press, 1971), quoting *Daily Report*, December 3, 1885. See, too, Russell H. Conwell, *Why and How: Why the Chinese Emigrate and the Means They Adopt for the Purpose of Reaching America* (Boston: Lee and Shepard Publishers, 1871).
- 28 Winfield J. Davis, ed., *History of Political Conventions in California, 1849–1892* (Sacramento: California State Library, 1893), 327. See also Robert Schwendinger, "Coolie Trade: The American Connection," *Oceans* (January 1980): 38–44.
- 29 Robert Schwendinger, "The Fearful Summer of '88: Shipwreck and Exclusion," *Ports in the West*, (1982), 86–96.
- 30 See M. Mark Stolarik, ed., *Forgotten Doors: The Other Ports of Entry to the United States* (Philadelphia: Balch Institute Press, 1988).

Pacific Mail

The story of the Pacific Mail Steamship Company is well known. Benefiting like few other companies from both federal subsidies and the perfect timing of the gold rush, Pacific Mail realized tremendous profits for investors. It also represented a major shift in the industrial history of California.

Needing a facility to repair and outfit its vessels, Pacific Mail chose a site on the deepwater Carquinez Straits in the town of Benicia. Sufficiently far up the delta, Benicia was free from the overly brackish water that could potentially wreak havoc on wooden ships, and provided anchorages considerably cheaper than those charged by similar locations in San Francisco. Savvy real-estate developers and influential local politicians were successful in getting Pacific Mail to establish their headquarters in that town, and it was a major employer for some time.

The Pacific Mail facilities represented the first large-scale industrial operations in California, and indeed, at any location along the Pacific coast of the United States. The vast complex included a foundry, coaling depot, smithy, and assorted other structures that the firm used for nearly two decades (1850–1868). After abandoning the site for other properties, the complex passed through a succession of owners, with many of the original structures falling into disrepair. Today, the coaling office and foundry are all that remain of a once extensive enterprise. Even these are in jeopardy, victimized by years of neglect and a recent incident of arson. Historic preservationists are currently working with the owner of the property and the city of Benicia to preserve these buildings so that the story of Pacific Mail might not be lost to future generations.

While Pacific Mail was instrumental in facilitating immigration from Asia, its true importance lay in its introduction of regular transpacific service, a venture that garnered the attention of other shippers. Pacific Mail was not alone for long, as rivals realized the profit potential from transpacific service. Lines such as the Occidental and Oriental (O&O), and a number of Japanese carriers, began challenging the Pacific Mail monopoly, as rates for first-class passengers destined for Hong Kong plummeted to \$125.³¹ In 1874, Pacific Mail announced that it would no longer ship its eastbound rail by freight, but would rather send its China steamers to Panama, and transship the freight there, via the Panama railroad. Railroad magnates led by the “Big Four”—Leland Stanford, Charles Crocker, Collis Huntington, and Mark Hopkins—planned a response. Funded by the Big Four, the O&O line was the foremost competitor to Pacific Mail, monopolizing West Coast railroad and all river transport on the tributaries of San Francisco Bay. A subsidiary of the Central Pacific and Union Pacific Railroads, it sought to leverage Pacific Mail to operate steamers in its interest, thereby cornering all traffic between Asia and the East Coast of the United States.

31 Robert Barde and Wesley Ueuntun, “Pacific Steerage: Japanese Ships and Asian Mass Migration,” *Pacific Historical Review* 73 (2004): 653–60. See also William Wray, *Mitsubishi and the N.Y.K., 1870–1914: Business Strategy in the Japanese Shipping Industry* (Cambridge, MA: Harvard University Press, 1984); and Robert D. Turner, *The Pacific Empresses: An Illustrated History of the Canadian Pacific Railway's Empress Liners on the Pacific Ocean* (Victoria: Sono Nis Press, 1981). On APL, see John Niven, *The American Presidents Line and Its Forebears, 1848–1984: From Paddlewheelers to Containerships* (Newark: University of Delaware Press, 1987).

Chartered in 1874, it leased its vessels from Great Britain's White Star Line, widely considered the most advanced for their time. *Oceanic*, *Belgic*, and *Gaelic* (the first generation of O&O liners) were revolutionary: at 420 feet long, with 3,000-horsepower four-cylinder engines (capable of attaining 14 knots) and imbued with opulence that bordered on decadence (including a massive saloon with two fireplaces and a library) the O&O line set the standard for transpacific travel.³² One officer reminisced:

No merchant ship ever sailed the seas that was so embowered in sentiment as the *Oceanic*. All the time we had her at San Francisco she was a great favorite of the travelling public and the people who took interest in ships. She was the first modern steamer that floated on the waters of the Bay of San Francisco and even to this day the old mariners speak of her beauty and smart lines. She was just as much of a clipper-ship as she was a steamer. And, oh my, how that ship could sail!³³

Later Pacific Mail vessels, such as *Korea*, *Siberia*, *Manchuria*, and *Mongolia*, were even grander: averaging 13,000 tons, they required a crew of 300.³⁴ However, O&O's liners directly threatened Pacific Mail: indeed, though the new competitor had but a three-ship fleet, the O&O reputation for speed and punctuality made significant inroads into Pacific Mail business. O&O's gamble paid off. A mutual agreement with Pacific Mail amounted to a market sharing arrangement whereby the companies produced an average of thirty-two roundtrip voyages per year, thereby dominating all traffic between Asia and the East Coast of the United States for the better part of three decades.³⁵ A shared depot at the Brannan Street Wharf transformed Steamboat Point—the name for the general neighborhood surrounding the O&O facility—into a key link for connecting San Francisco to Oakland, to the Orient, and to the commerce of the world by both rail and water freight. It presented a scene of concentrated business activity concerned with and dependent on moving both the people and all the things that the fast-growing city needed. From 1866 through 1890, growth continued, especially after the opening of the Transcontinental Line in 1869, at about which time warehouse space became vastly more important than manufacturing.

As technology progressed, and the cost of transit declined, the size of the vessels grew appreciably. *City of Peking*, a 5,080-ton iron screw steamer built by Pacific Mail in 1874, made 116 round-trips from San Francisco to Hong Kong; *City of New York* and *City of San Francisco* were similarly employed. By the late 1890s, Pacific Mail modernized its fleet by building 600-foot steel steamers of 13,638 tons gross, which were the largest vessels yet built in the United States. However, the increasing size of its ships could not protect Pacific Mail from competitors even more determined than O&O.

Pacific Mail itself withdrew from transpacific service in 1915, leaving the operation to

32 *Oceanic* was launched in 1870 at the Belfast yards of Harland and Wolff and had extensive service in the Atlantic trade. Her younger siblings had been built expressly for the transpacific run.

33 Roy Anderson, *White Star* (Prescott, Lancashire, England: T. Stephenson and Sons, 1964), 68.

34 Built by the Newport News Shipbuilding and Drydock Company, these four vessels had originally been built for Pacific Mail. Bought out by Southern Pacific—which had already acquired the Central and Union Pacific Lines—there was no longer any need for competition with O&O, so the vessels were liquidated. Pacific Mail Steamship Company, *Mongolia*: Statement of General and Particular Average, 1906, vol. 2, mss., Huntington Library.

35 John Haskell Kemble, "The Big Four at Sea: The History of the Occidental and Oriental Steamship Company," *Huntington Library Quarterly* (April 1940): 339–57.

the Japanese Toyo Kisen Kaisha and, later, the China Mail Steamship Company.³⁶ The latter was particularly popular, especially with the Chinese community, though racism and allegations of unsafe operations and illegal activity plagued its history.

While Pacific Mail was waning, by the mid-1920s, the Dollar Steamship Company dominated Pacific routes, first operating along the California coast, then between the West Coast and the Orient, and finally, in 1924, with regular around-the-world service for cargo and passengers. By 1926, Dollar acquired Pacific Mail and all its holdings.³⁷ Seven years later, the acquisitive Dollar added H. F. Alexander's Pacific Steamship Company to its fold.³⁸ Subjected to the difficult conditions caused by a surfeit of ships and a lack of business caused by high tariff barriers and an isolationist foreign policy, the company ran into serious financial distress during the early years of the Great Depression. Acquired by the federal government in 1938, its vessels were renamed exclusively after American presidents (a process begun in 1922) and the company itself bore the name American President Lines (later, simply, APL).

While transpacific commerce and trade was the most obvious manifestation of deepwater commerce, it was by no means the only one. The building of the Panama Canal shortened the journey between California and European ports dramatically, leading to an increase in tourist traffic and to a growth in foreign trade with that part of the world. Thanks to Dollar's around-the-world service, San Francisco became a destination not just for businessmen and adventure-seekers, but for globe-trotting tourists and vacationing families. Meanwhile, tramp steamers replaced many of the big square-riggers in the bulk trades until they too were replaced by regularly scheduled liner service between San Francisco and other ports. In short, whether as a destination, point of origin, or just as transshipment, San Francisco, within just sixty years, had become the major port of the eastern Pacific. It was a remarkable transition.

It stands to reason that foreign trade would be greatest not with those nations across the ocean, but with those who share our common border. Coastal lines linked San Francisco to the Canadian West Coast, though in numbers that seemed miniscule by comparison to the southern trade. Lumber and coal were the primary exports from British Columbia, with manufactured items of all types returning by way of coastal schooner. Eventually, passengers began filling out this cargo, and it was not long until the arrival of coastwise passenger service. Trade to Mexico was more lasting. As we have seen, Pacific Mail steamers routinely stopped at Mexican ports en route to and from San Francisco to seek fresh provisions, refill their coal bunkers, and take on additional mail or cargo. Likewise, and beginning in 1852, the Colorado Steam Navigation Company linked California ports with Arizona via the Sea of Cortés. Operating without benefit of a federal

36 On China Mail, see Robert Eric Barde, *Immigration at the Golden Gate: Passenger Ships, Exclusion, and Angel Island* (Westport, CT: Praeger, 2008).

37 Dollar was able to outmaneuver, through political influence, the management of Pacific Mail (essentially moribund by this date, owing to its lack of steamers) and was awarded the charter on the passenger liners that entity had been operating on transpacific runs. (Pacific Mail, picked up by W. R. Grace in 1915, ran transpacific steamers for another decade after that time. The Dollar Line won this route—as well as a handful of government-owned liners that Pacific Mail had been running.) Dollar acquired the name, cheaply, but ignored the lines, preferring to make considerable profits by operating separate companies that supplied materials and services to the steamship industry.

38 Robert Dollar, *One Hundred and Thirty Years of Steam Navigation: A History of the Merchant Ship* (San Francisco: Robert Dollar Company, 1931).

subsidy, this entity struggled for a quarter century. After railroad service was established between San Francisco and Yuma in the 1870s, however, the profitability of the sea route dropped, and the Mexican government found it necessary to offer a subsidy in order to maintain communication and trade among the Gulf ports. Similar challenges forced that government to offer subsidies to the aforementioned Pacific Coast Steamship Company to operate service to San Francisco. Those same forces of overland transportation also forced Pacific Mail to change its policies, as that firm negotiated an agreement with Mexican authorities hoping to recoup its losses. As of February 1872, additional passengers could hop aboard Pacific Mail steamers such as the 1,450-ton *Orizaba*, at a variety of Mexican ports, and take passage to San Francisco for as low as 2,000 pesos (about \$40 US).³⁹

By the late nineteenth century, then, Baja became increasingly tied to her northern neighbor, thanks to several navigation companies that the Mexican government subsidized in order to link the peninsula with the mainland by sea and help build the territory's economy through trade with American territories. These subsidies covered certain routes and thus ensured the transportation of the region's goods and passengers; a number of companies took advantage of this offer of a guaranteed income to establish navigation routes stretching south from San Francisco and San Diego to Mexican ports on the Pacific and the Gulf of California, in some cases extending their reach to Central America.⁴⁰

The commodities that circulated through this system support the contention that San Francisco had become both an entrepôt with an enormous reach and a major player in international trade. Mexican-bound vessels brought cargoes of German glass, toys, and musical instruments, French perfumes and pharmaceuticals, English furniture, and other luxury items that had earlier made their way to San Francisco. On the return north, they carried commodities vital to the industrialized activities that marked Victorian San Francisco: silver, pearl oyster shells and pearls, *orchilla* plants for making fabric dye, copper, and other metals and a wide variety of agricultural goods, including *damiana* (a native plant used for making tea and liquor), *cascalote* (a tree bark used for tanning leather), and occasionally fruit, wine, and *panocha* (a sugar cane used as a sweetener).⁴¹

California Maritime Academy

The professionalization of maritime education in the United States began in the 1870s with the establishment of maritime academies in New York and Pennsylvania. On the West Coast, this commenced with the creation of the California Nautical School (CNS) in 1929. The mission of the school was "to give practical and theoretical instruction in navigation, seamanship, steam engines, gas engines, and electricity in order to prepare young men for service as officers in the American merchant marine." First located in Tiburon, the CNS trained officers for the US Merchant Marine, granting licenses in both Marine Engineering and Marine Transportation. Courses of study typically lasted three years. In addition to standard classroom courses, matriculants gained valuable shipboard

39 Karen Jenks, "California Littoral: The Pacific Mail Steamship Company and the Remaking of Coastal California, 1830–1900" (PhD diss., University of California, Irvine, 2010).

40 Karina Busto-Ibarra, "Maritime Trade between the Californias in the Late 19th Century," *Mains'l Haul: A Journal of Pacific Maritime History* 35, no. 4 (1999): 36–49.

41 *Newbern's* cargo manifest is telling: during summer and fall 1881, she carried 1,675 containers of *orchilla*, weighing 326,340 pound, from Bahia Magdalena to Rodgers, Meyers, and Company of San Francisco. Busto-Ibarra, "Maritime Trade," 44.

experience aboard the school's various training ships, cruising to ports across the globe. In 1939, the school was renamed the California Maritime Academy (CMA), and the following year, graduates earned a bachelor of science degree to accompany the US Coast Guard licenses that marked the culmination of their studies.

During the Second World War, the campus was relocated to San Francisco, and an accelerated program meant the prescribed course of study could be completed in as little as eighteen months. Eleven graduates lost their lives serving as Merchant Mariners during the war, and countless others served valorously, living up to the school's motto "to work or to fight, we are ready." In the postwar years, the school returned to its three-year course of study and found another new home. In 1946, the campus relocated to Morrow Cove, a bucolic location in South Vallejo adjoining the Carquinez Straits. By 1973, CMA had become the first maritime academy to admit women (graduating three in 1976), maturing to a four-year degree path and gaining regional and national accreditation.

Cal Maritime became part of the California State University system in 1995, and now offers seven baccalaureates and one master's degree. Approximately eight hundred students currently pursue courses of study that include such fields as Maritime Policy and International Business and Logistics, in addition to the traditional backbone of maritime transportation paths. Students continue to sail and train aboard the Training Ship Golden Bear, and alumni from the institution are plentiful in today's global maritime industry.

This trade was important to the economic development and integration of Baja California, since residents of the barren and geographically isolated territory depended on the mainland for many necessities. Unlike the Mexican mainland, connected by railways with American markets, Baja California depended solely on maritime transportation to facilitate its development, enabling the territory to participate in international trade by exporting its diverse raw materials and contributing significantly to the economic growth of its main trading partner, San Francisco. The size and scope of this maritime activity, coupled with the needs of the transpacific trade, required facilities and a labor force capable of supplying this demand. The following chapter traces the development of maritime industries such as shipbuilding in the San Francisco Bay region, and the development of maritime labor unions in the area.

Depiction of the packet ship *Tropic Bird* by well-known maritime artist Charles Robert Patterson. The island traders extended for another generation the tradition of wooden shipbuilding in the United States and captured the public imagination for speed under sail. The 347-ton three-masted barkentine *Tropic Bird* was built by John Kruse for Thomas McDonald and was lost in 1907 at Perula Bay, Mexico.



Courtesy Robert Lloyd Webb, Sailor-Painter:
The Uncommon Life of Charles Robert
Patterson (Flat Hammock Press, 2005).

The 267-ton brigantine *John D. Spreckels* was built by Matthew Turner for the inter-island trade, ferrying general cargo and fine freight to Honolulu on a regular schedule. Like many Turner products, *Spreckels* was built for speed, as the studding sails can attest.



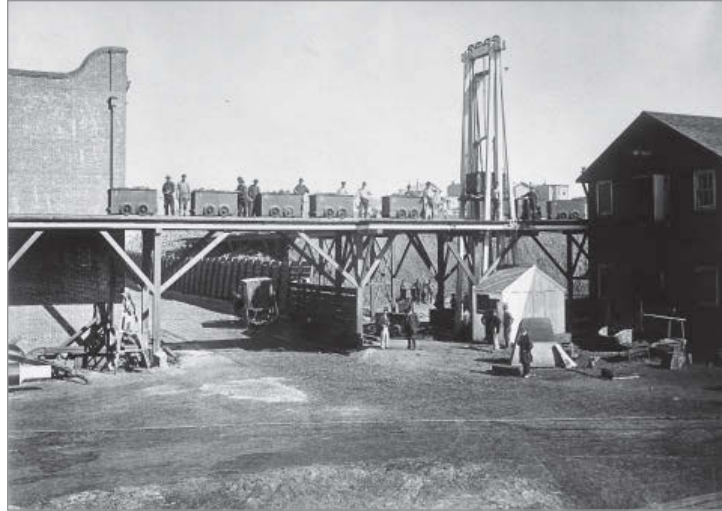
Courtesy San Francisco Maritime National
Historical Park, J.W. Proctor Collection.
J7.1556In.

With the advent of transpacific steam, came increased numbers of Asian immigrants. Here, an artist captures a scene involving a group of Chinese immigrants aboard the steamship *Alaska*.



Courtesy San Francisco Maritime National
Historical Park. J10.20220

Coal yard and tramway on the Pacific Mail Steamship Company Wharf, 1871.



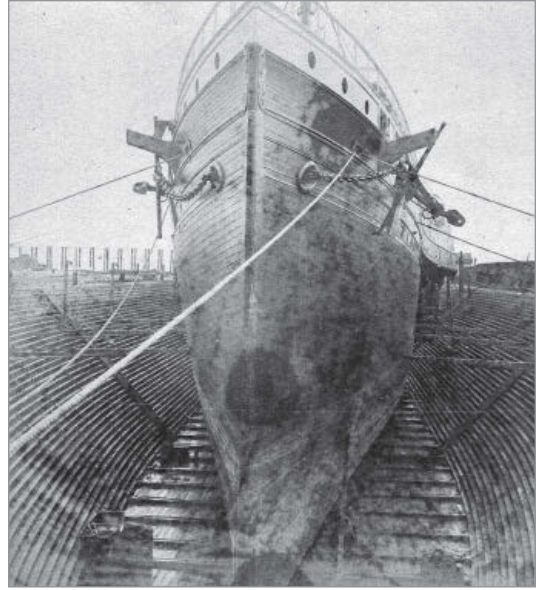
Courtesy San Francisco Maritime National Historical Park.
A12.18, 315 PSL.

Pacific Mail steamers Colorado and Senator. The paddlewheel steamer Senator had been built in 1846 for the run from Bangor to Boston, but was transferred to the West Coast at the onset of the gold rush, where she served as both river steamer and in coastal operations. This partial panorama, taken in 1871, shows the Pacific Mail Docks and Oriental Warehouse.



Courtesy San Francisco Maritime National Historical Park.
Watkins Carleton, photographer. A12.18, 322n.

Original stereopticon (post-1867) image of the Pacific Mail transpacific side-wheel steamer SS Japan at the California Drydock in Hunter's Point, San Francisco for maintenance.



Courtesy Stephen J. and Jeremy W. Potash Collection. Copyright Stephen J. and Jeremy W. Potash (Steve@Potashco.com).

Original hand-colored lithograph, ca. 1867, of the wooden side-wheeler SS China, built by William Webb of New York for Pacific Mail's pioneering steamer service between San Francisco, Japan, and China.



Courtesy Stephen J. and Jeremy W. Potash Collection. Copyright Stephen J. and Jeremy W. Potash (Steve@Potashco.com).

CHAPTER 11

SHIPYARDS AND LABOR ISSUES

Shipbuilding and various boat repair operations were ongoing in the area now known as the San Francisco Bay since humans in the region first went to sea. Indigenous persons constructed their tule balsas at virtually any point along the shoreline, and by the 1830s, as we have seen, William Richardson operated a small launch and repair facility in Yerba Buena cove.¹ As with so many other aspects of Bay Area maritime history, the gold rush transformed shipbuilding operations in the region, and shortly after that event, the greater San Francisco Bay area became one of the most important ship construction and repair facilities in the world. During the twentieth century, external events—such as a pair of world wars and the awarding of government contracts to local shipyards—even further converted the greater San Francisco Bay Area into one of the most productive shipbuilding facilities the world had ever seen. With the rise of ship-related industry, issues germane to maritime labor converted the region into a hotbed of union activism. It seems as if these two processes cannot be understood unless studied in close juxtaposition: as San Francisco modernized and industrialized, it became home to several notable labor unions. This chapter traces the development and evolution of both the shipbuilding industry and maritime labor organizations in the Bay Area.

During San Francisco's nascence, the building of bay and coasting vessels was accomplished with relatively little capital outlay. At this point, all that was required of a shipyard was a sliver of flat land big enough to set up the vessel and proximity to water. All along the waterfront, a plethora of shipyards, ship-breaking operations, and ship repair facilities sprang up in the wake of the gold rush. By the late 1850s to mid-1860s, the yards of William Boole, Domingo Marcucci, Henry Owens, Patrick Henry Tiernan, and John G. North, among others, began producing side-wheel and stern-wheel steamboats along the Embarcadero from South Beach to the place that became known as "Steamboat Point."² This was a new venture: as late as September 1848, there was no real activity south of Rincon Point. Until the maritime industrial development of the area, the waterfront in this part of the Bay was relatively isolated, with Rincon Hill and its fashionable residences being an exclusive enclave of the wealthy. A visiting sailor, Captain Timothy Harrison of the steamer *Belfast*, reported that the beaches here "offered a prominent and most beautiful view of the city and the harbor. . . . It was a quite fashionable Sunday destination . . . many races were run on the beach at low water by the owners of mustang ponies."³ None could predict that the

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- 1 "Evolution of Shipping and Ship-Building in California," *Northwest Magazine* (January 1895): 5–16.
 - 2 On this phenomenon, see William H. Thiesen, *Industrializing American Shipbuilding: The Transformation of Ship Design and Construction, 1820–1920* (Gainesville: University Press of Florida, 2006).
 - 3 Roger Olmsted, *San Francisco Waterfront: Report on Historical Cultural Resources for the North Shore and Channel Outfalls Consolidation Projects*. (Prepared for the San Francisco Wastewater Management Program, 1977), 164.

bucolic region would soon transform into a booming industrial locale.⁴

The low-water mark that made the area conducive to horse races also made it ideal for shipbuilding and ship repair, since the slope of the shoreline below high-tide mark made vessel access easier there than at any other point in the city. By 1851, marine operations had gotten underway. On June 14 that year, Henry B. Tichenor purchased a lot at the corner of Townsend and 2nd Street for \$2,700, opening a marine railway on the spot that summer. It was a prudent decision: two years later, an adjacent lot sold for \$40,000 as entrepreneurs sought to take advantage of the neighborhood's attributes. In his sixteen years in operation, Tichenor serviced over 1,000 vessels, his first being the brig *Sidi Hammet*, who had her bottom coppered just weeks after Tichenor acquired his property. Tichenor was not alone: a floating dry dock was competing with Tichenor's operation within four years, and a great stone graving dock was completed at nearby Hunter's Point in 1868.⁵

As documented by Roger and Nancy Olmsted, the entire waterfront from beyond Mission Bay to the region approaching the current Ferry Building was a mixture of shipyards, shipbreaking facilities, and other such enterprises that "resembled so much ghastly marine debris."⁶ It was a scene of concentrated business activity, concerned with, and dependent upon, the movement of both the people and the things that a fast-growing city needed. The Pacific Rolling Mills (1866), San Francisco Gas and Electric Company (1872), California Sugar Refining Company (1881), Union Iron Works (1883, after relocating from First and Mission Streets), and the Arctic Oil Works of the Pacific Steam Whaling Company (1884) were all found here, each with private wharves and extensive warehousing operations to facilitate their business.

The Folger and Tubbs Cordage Company (founded just south of Potrero Point in 1856 by Captain William Folger, patriarch of the coffee clan, and Massachusetts transplants Alfred and Hiram Tubbs) produced the first rope manufactured in the United States outside New England, and featured a 1,400-foot-long ropewalk that extended into the Bay. Smaller operations, usually employing a dozen or so workers, were scattered along the waterfront, churning out the ubiquitous scow schooners, lumber droghers, and assorted craft that made up the Bay Area armada. It was materials, craftsmen, and above all else a master carpenter, that constituted a shipyard.⁷

Workboats were not the only kind of vessel under production along the waterfront. John Twigg's Boatbuilding Shop employed builders and designers of high-class sailing and power yachts, and G. W. Kneass specialized in building elegant boats and launches from his facility located just north of the Union Iron Works. Larger operations catered to deepwater

4 On the transformation of the region, see Mary Pratzellis, Adrian Praetzellis et al., *Tar Flat, Rincon Hill, and the Shore of Mission Bay* (Rohnert Park, CA: Anthropological Studies Center, Sonoma State University, 1993). See also Nancy Olmsted, *Vanished Waters: A History of San Francisco's Mission Bay* (San Francisco: Mission Creek Conservancy, 1986); Albert Shumate, *South Park and Rincon Hill: San Francisco's Fashionable Neighborhood* (Sausalito: Windgate Press, 1988); and Robert Courland, *The Old North Waterfront: The History and Rebirth of a San Francisco Neighborhood* (San Francisco: Ron Kaufman Companies, 2004).

5 *Daily Alta California*, December 31, 1855.

6 James Allan, "So many ghastly piles of marine debris': Discovery of the Whaling Ship *Candace* in Downtown San Francisco" *Proceedings of the Society for California Archaeology* 20 (2007): 9–14, <http://www.scahome.org/publications/proceedings/Proceedings.20Allan.pdf>.

7 See Diane Cooper, "From Small Ways to Big Business: The Growth of the Wooden Ship Construction and Waterborne Industries along the United States' Pacific Coast, 1875–1900" (master's thesis, East Carolina University, 1995).

and coasting craft, were at the forefront of naval architecture, and employed skilled craftsmen. Among the most notable of these yards were those owned and operated by Schultze, Robertson, and Schultze; John and James Dickie (ably assisted by John's son, David, a naval architect who began work in the years just prior to World War I); Alexander Hay; C. A. Castner (specializing in spars); and George Boole and Angus Beaton.⁸ The latter catered to the lumber trade, and it was said that their contribution of steam schooners to that industry revolutionized the market. The close proximity of some seventeen lumber yards (the largest of which handling upwards of seven million board feet of lumber) and mills along the waterfront meant these facilities had ample customers. Planing mills, cigar-box manufacturers, furniture factories, and cooperages fleshed out the neighborhood. It was a city literally and economically built on wood: plank sidewalks wore out quickly, and there was an ever-increasing demand for wood and lumber in the burgeoning town. It was also a city that was apparently hell-bent on environmental destruction: Channel Creek, which allowed lumber schooners and other craft easy access to the warehouses and mills of the neighborhood, was soon littered with debris. Fred Klebingat, a sailor who frequented San Francisco in the early twentieth century described the scene⁹:

The creek was an open sewer, and it was thick as soup . . . a cesspool that emitted offensive odors, especially at low tide. Gas bubbles broke the surface. We knew what the contents of that creek were. . . . They said that if you fell overboard you would not last more than two minutes . . . it could turn white lead paint black in one night . . . if you took two gulps of that stuff it would be the end of you . . . it was universally known up and down the coast by sailors as "shit creek." As bad as the stench as, it was the busiest place on the San Francisco waterfront.¹⁰

San Francisco was not the only Bay Area community that featured impressive shipyards. Benicia, in particular, had a long tradition of wooden shipbuilding. As early as 1850, the Pacific Mail Steamship Company began building wharves and machine ships for the maintenance of their steamers in that town, and this establishment represented the first large industrial enterprise in the state. The plant was eventually sold and the company ceased to use Benicia as a repair and supply base, but greater things awaited that community. Matthew Turner, an Ohioan who had operated a shipyard in San Francisco since 1868, relocated to Benicia and operated his facility there from 1883 to 1903. During his career, Turner launched more wooden vessels than any other individual builder in North America, with most of the 228 craft fabricated at his Benicia yard.¹¹ Turner was not alone, and his colleagues were prodigious: by 1880, shipbuilding and repairs at California yards were valued at \$1.8 million, just behind the

8 In later years, several of these yards would relocate to Oakland and Alameda. The case of the Stone family is illustrative: William I. Stone had established a yard in India Basin in the 1850s. His son, William F. "Frank" Stone set up first in Tiburon, then later at Harbor View in San Francisco and ultimately in Oakland. Lester Stone then relocated the family firm to Alameda.

9 Klebingat first arrived in San Francisco in 1909 at age twenty, sailing aboard *S. N. Castle*. His reminiscences can be found in Captain Fred Klebingat, *Memories of the Old City-Front*, Historic Documents Collection, J. Porter Shaw Library, San Francisco Maritime National Historical Park.

10 Cited in Olmsted, *San Francisco Waterfront*, 125. Not much had changed by the mid-twentieth century, when estimates placed the volume of untreated (raw) sewage entering the bay in 1950 at a staggering 250 million gallons per day.

11 On Turner, see Alan Thewlis, "Matthew Turner: Builder of Wooden Boats," *Mains'l Haul: A Journal of Pacific Maritime History* 28, no. 3 (1992): 16–20.

traditional American centers of Maine and southern New England, and more than six times as great as that contributed by Washington and Oregon combined.¹² Most, however, were small facilities specializing in small craft, making their vessels out of the cheap and locally available wood culled from forests in the Pacific Northwest.

Matthew Turner

Among the most notable of Bay Area shipwrights was Matthew Turner. Born in Geneva, Ohio, in 1825, he learned from his father how to build small fishing vessels used along Lake Erie. By 1850, he headed to California, where he made a considerable sum in the Sierra goldfields. Returning to the East Coast, he purchased a schooner, *Toronto*, and sailed back to San Francisco. Here, he hauled lumber from Mendocino to the city, operating this service with a partner, Captain Richard Rundle. In time, the pair added a second schooner, *Louis Perry*, and diversified their operations. By 1860, Turner owned a brig, *Temandra*, that shuttled supplies to Siberia (during one of her runs she stumbled upon a rich codfishery, which Turner later served) and the ship *Porpoise*, which did the same in Tahiti.

Hoping to expand his operations, but having a difficult time finding vessels that met his exacting specifications, Turner began building his own. In 1868, he acquired property in Humboldt County. The product of this venture, the Eureka-built *Nautilus*, was so swift that Turner built more ships, eventually opening a commercial shipyard on San Francisco's Channel Street. It was a marked success. By 1883, business had expanded to such a degree that Turner decided to relocate to the deepwater port of Benicia, located on the Carquinez Straits.

The site was well-chosen. Working with his brother Horatio and a third partner, John Eckley (his original business partner, Rundle, had died, and Turner—who lost his wife in childbirth—eventually married his Rundle's widow), Turner built a yard, blasting through solid rock to fashion the ways, deemed the largest on the West Coast. With over thirty employees, Turner fulfilled many contracts and his craft were noted for their speed: in 1901, the 1,091-ton *Amaranth* set the standard, covering the Shanghai to Astoria run in 23 days. William C. Irwin made the San Francisco to Maui run in 8 days, 17 hours. *Galilee*, likewise, once made the San Francisco to Papeete run in 22 days, and average only slightly longer (28 days) over the course of its career. *Galilee's* stern is included in the SFMNH collection, exhibited on the east wall of Fort Mason Center. The bow of that craft is located in Benicia, preserved by the Benicia Historical Society.

Turner's affinity for speed was not limited to commercial craft. A charter member of the San Francisco Yacht Club, he built boats for many colleagues. Among the most notable was the schooner yacht *Lurline*, built for the Spreckels family, which won three of the first four transpacific races that linked Southern California and Honolulu.

Turner retired in 1906 and died three years later at his home in Berkeley; in his 33-year career, he produced 228 vessels, more than any other American shipwright. His Benicia shipyard, managed by James Robertson until it was dissolved in 1918, produced 169 of these. Turner's legacy is commemorated by a small park and memorial in Benicia and by an elementary school bearing his name in that town. At low tide, the remnants of this facility, including stone ways and the rotting hulk of the whaler *Stambohl* used

12 Henry Hall, *Report on the Shipbuilding Industry in the United States* (Washington, DC: GPO, 1884).

as a work platform during the yard's heyday, are still visible. The site is listed as State Historical Landmark No. 973.

Larger vessels, particularly those with iron or steel hulls, were not built in San Francisco Bay until nearly forty years after the gold rush. In 1880, the Union Iron Works (UIW) began to make definite plans to build steel ships.¹³ Founded by Belfast-born Peter Donahue in 1849, the UIW began as a blacksmith shop, producing machinery for various gold-and silver-mining ventures.¹⁴ As mining declined, the firm, now managed by Donahue's two sons, diversified their operations, venturing into new fields such as railway engines.¹⁵ By 1883, the brothers sold the firm to Irving Murray Scott, who soon opened a plant at Portrero Point, establishing the first shipyard capable of producing metal ships anywhere in the Pacific Basin.¹⁶ In the process, the facility became the first large, modern shipyard on the Pacific Coast, quickly becoming the largest single employer in San Francisco and covering twenty-five acres with 1,300 employed men. The first steel ships in the Pacific Coast (the first was the 800-ton steam collier *Arago*, launched in April 1885, and designed for service between Coos Bay, Oregon, and San Francisco) launched from this yard, as UIW soon rivaled established East Coast and European facilities.¹⁷ The transformation was not lost on contemporary observers. One correspondent noted the change:

Even as late as twenty years ago, the building of large, ocean-going steamers on the Pacific Coast was not seriously regarded by the world east of the Rocky Mountains. Today there are no better built ships anywhere than those constructed right in San Francisco. The Union, Risdon and Fulton Iron Works, Boole's shipyard, Dickie's yard, and a few lesser ones, are capable of turning out as splendid vessels as any of the boasted yards of England, Scotland, Germany or the Eastern United States. San Franciscans always knew of the capabilities of their local shipyards.¹⁸

In addition to building ships for commercial use, the UIW was a major producer of ships for the expanding steel navy.¹⁹ Bethlehem Steel purchased the yard in 1905, and, as the

13 Joseph Aaron Blum, "San Francisco Iron: The Industry and its Workers, from the Gold Rush to the Turn of the Century" (master's thesis, San Francisco State University, 1988).

14 There was nothing unusual in the Donahue's immigrant status. Other San Francisco shipbuilders, such as the Dickie Brothers (Scotland), Domingo Marcucci (Italy), John North (Norway), and Henry Owens (Wales), shared this trait.

15 On Donahue, see Richard H. Dillon, *Iron Men: Peter, James, and Michael Donahue* (Point Richmond, CA: Candela Press, 1984). See also Hubert Howe Bancroft, "History of the Life of Peter Donahue," 1890, oral history transcript, Bancroft Library, University of California, Berkeley.

16 See "Mr. Irving M. Scott: Pioneer Ship-Builder of the Pacific Coast," *Pioneer* 8, no. 11 (November 15, 1898): 159. Scott was ably assisted by his superintendent, George Dickie.

17 *Arago* would gain notoriety in a landmark 1893 US Supreme Court decision, wherein the justices determined that merchant seamen were wards of the state, who had signed away their freedoms upon joining a ship, and who were therefore not covered by Thirteenth Amendment protections against involuntary servitude. That decision stood until the Seaman's Act of 1915 was signed into law.

18 *San Francisco News Letter*, July 21, 1906.

19 Among the notable craft delivered to the US Navy from this yard was *Olympia*, which served as Admiral Dewey's flagship during the Battle of Manila Bay.

Bethlehem Steel Corporation, Ship Building Division, continued to build ships through two world wars and into the 1960s.²⁰ A comparable facility, the Alameda Works, had ways for six ships and a facility ranging over seventy-five acres, making it one of the largest such operations in the nation. Though ship production ceased in 1923, it continued as a repair yard, and was a major component to the region's economy during World War II, though by 1956 it had closed for good. The UIW and its subsequent iterations, now managed by the Port of San Francisco, continues today as the only repair yard for large vessels in San Francisco, representing the oldest continuously operated shipyard in the United States.²¹ The first industries in California, then, were maritime-related: the depot and shops of the Pacific Mail Steamship Company, the Union Iron Works, and smaller foundries in the surrounding area could all trace their origins to maritime affairs.²²

Irving Scott and the Union Iron Works

When Peter Donahue decided to sell the Union Iron Works (UIW) to concentrate his time and energies on building San Francisco's first gasworks (the predecessor of today's Pacific Gas and Electric, PG&E), he had just the man in mind. Based on his reputation as a talented and efficient engineer, Irving Scott was recruited by Donahue to lead the UIW. Upon acquiring the company, Scott placed his brother Henry Tiffany Scott in charge of the financial operations while he toured the nation looking for new ideas and investment opportunities. Under the Scotts' tutelage, UIW produced much of the heavy mining equipment used in the West, but the brothers realized that this was a short-lived phenomenon. Something more lasting was needed.

In 1883, UIW moved from South-of-Market to Potrero Point, producing steel and iron ships. This state-of-the-art facility was maximally efficient and highly self-sufficient. Scott started a recruitment program to attract skilled shipwrights from Scotland, and began an apprenticeship program to teach local youths the skills for the rapidly developing industry. The high cost of importing materials to California required the yard to produce its own steel, or acquire it from neighbors such as the Pacific Rolling Mills. This was done, and just two years after opening, Arago slid down the ways, the first steel ship built in the Pacific.

Through assiduous lobbying efforts, Scott landed government contracts, convincing legislators that West Coast shipyards could produce steel-hulled ships as efficiently as their East Coast competitors. Among the craft that UIW produced was the USS Olympia, flagship of Admiral Dewey at the Battle of Manila Bay, as well as battleships Oregon, Ohio, and California.

Bethlehem Steel purchased UIW in 1905. The following year, the yard sustained substantial damage from the great San Francisco earthquake: a hydraulic dry dock was damaged beyond repair, and considerable assets were lost as a result of the calamity. It was, however, not the end of the venerable company. Under the leadership of Charles Schwab, Bethlehem Steel grew strong in the wake of the earthquake, expanding its

20 "History of Bethlehem's San Francisco Yard," *Pacific Marine Review* 46 (October 1949): 27–34.

21 SFMNH holds extensive records, photographs, and artifacts from the company.

22 Examples include San Francisco's Risdon Iron Works (which, like the Union Foundry, had begun by building machinery for mining and industrial uses) and the Continental Iron Works in Vallejo. See Dean Mawdsley, *Steel Ships and Iron Pipe: Western Pipe and Steel Company of California—The Company, the Yard, the Ships* (San Francisco: Friends of the San Francisco Maritime Museum Library, 2002).

operations and buying up dry docks at Hunter's Point, shipyards in Alameda, and the competing Risdon Iron Works. During the World War I, the Bethlehem facility averaged three destroyers per month, turning out 66 of these craft, and 18 submarines. Despite setbacks caused by the Great Depression, the facility was one of the most productive shipyards in the country on the eve of World War II.

During that conflict, the yard employed nearly 10,000 workers employed in three daily shifts. This round-the-clock operation allowed for the construction of 72 vessels and repairs to another 2,500. In one amazing episode, the destroyer escort Fieberling launched after just 24 days. The return of peace meant slowed production schedules and declining contracts, but the yard persevered. In the two decades following war's end, the yard turned out another 17 vessels, delivering its last ship, USS Bradley, in May 1965.

While the facility no longer produces ships or other heavy equipment, the Potrero site—now managed by BAE Systems—continues to repair ships and is one of the largest repair facilities on the West Coast. A large number of historically and architecturally significant structures remain intact, if unused, on the site.

The Union Iron Works facility was nominated to the National Register of Historic Places in 2011 as a Historic District and the Port of San Francisco has issued a request to developers interested in rehabilitating the site.

While the demands of the local economy dictated sufficient shipbuilding and repair facilities in San Francisco, these industries received a tremendous stimulus due to external forces. The Klondike gold rush and the nearly simultaneous demands of the Spanish-American War set off a small shipping boom, and many lumber schooners, Downeasters, and assorted other craft made their way north, in a scene reminiscent of the great California gold rush.²³ These events had a ripple effect: as older craft shuttled to far-off locales, San Francisco-based yards churned out their replacements. The demands of World War I generated tremendous interest and activity in Bay Area shipyards. Just ten days after the United States declared war on the Central Powers, the United States Shipping Board (replicated during World War II as the War Shipping Board) established the Emergency Fleet Corporation to “acquire, maintain, and operate merchant ships so as to meet the demands of national defense and of domestic and foreign commerce.”²⁴ Massive infusions of capital and a highly motivated workforce moved to the region to take employment in one of the many yards with government contracts.²⁵

During that conflict, the federal Emergency Fleet Corporation, with a budget estimated at twice the value of the entire world's merchant marine fleet, established new shipyards and increased construction. The goal was ambitious: estimates put the war effort's shipping requirements at six to ten million deadweight tons. When war was declared, the United States had but 300,000 tons at its disposal. Hundreds of steel vessels were requisitioned,

23 B. Franklin Cooling, *Grey Steel and Blue Water: The Formative Years of America's Military Industrial Complex, 1881–1917* (Hamden, CT: Archon Books, 1979). The Klondike and war shipping booms reversed a shipping depression that had gripped the entire Pacific coast since the early 1880s.

24 Noel H. Pugach, “American Shipping Promoters and the Shipping Crisis of 1914–1916: The Pacific and Eastern Steamship Company,” *American Neptune* 35 (1975): 166–82.

25 On the efforts of the Emergency Fleet Corporation, consult Robert Kilmarx, ed., *America's Maritime Legacy: A History of the United States Merchant Marine and Shipbuilding Industry* (Boulder, CO: Westview Press, 1979).

and the government took over orders that domestic yards had promised to foreign clients. Several new yards were created, and the government managed dozens more. Still, the results were disappointing, with new vessel construction running as long as fourteen months from keel laying to launching. By October 1918, fewer than 400 vessels had entered service, and by war's end, only 44 percent of the called-for ships had been completed.²⁶ While the national effort was disappointing (the massive facility at Hog Island, located on the Delaware River just outside Philadelphia failed to launch a single vessel before the armistice), local production was impressive.

Bay Area yards, including such new ventures as Oakland's Hanlon Dry Dock and Shipbuilding Company, and Alameda's Barnes and Tibbetts (later General Engineering Company), as well as expanded operations like Moore and Scott (Oakland) and James Robertson (Benicia), were especially productive, producing over a quarter of all wartime merchant ship deliveries. All told, from 1914 to 1918, the western yards built 759 vessels totaling 5,249,150 deadweight tons. Some of the yards reintroduced old techniques, focusing on wooden-ship construction, while others employed novel strategies, such as concrete ships, a phenomenon that did not necessarily disappear with the return of peace.²⁷ Military vessels were completed with astonishing speed. Mare Island Naval Shipyard produced countless craft for the military, including destroyer USS *Ward*, launched in just 17.5 days.²⁸ Despite these successes, the shipbuilding industry was in many ways underperforming: many of the orders were placed with nearly formed yards that proved unable to fulfill their contracts on time and only fifty-five of the wooden craft were completed before the armistice.²⁹ The federal government, likewise, voided many contracts, leaving shipbuilders bankrupt and angry.

The return of peace left a glutted market. Despite the seeming failures of the Emergency Fleet Corporation, the tonnage engaged in the US Merchant Marine more than doubled between 1916 and 1922. Between 1922 and 1928, not a single new ship for world commerce was built in the United States, and in the decade before 1940, America's shipyards launched only twenty-three ships. Many famous and long-lived shipyards went out of business during these years. Political developments following the war favored a return to isolationism and an "American First" focus to federal policy. In response to these political developments and to the fact that the large fleet of government-owned ships was expensive to maintain and operate, many ships were sold to private companies both in the United States and abroad. The Dollar Steamship Company chartered and eventually purchased several of the vessels, bolstering its fleet and assuming an increasingly important position in the transpacific steamship business after the conclusion of hostilities. Vessels designed as troop transports were retrofit to

26 See, Richard Sicotte, "Economic Crisis and Political Response: The Political Economy of the Shipping Act of 1916," *Journal of Economic History* 59, no. 4 (December 1999): 861–84.

27 See Robert Eberhardt, "Concrete Shipbuilding in San Diego, 1918–1920," *Journal of San Diego History* 41, no. 2 (Spring 1995), <http://www.sandiegohistory.org/journal/95spring/shipbuilding.htm>; and Jean Haviland, "American Concrete Steamers of the First and Second World Wars," *American Neptune* 22 (1962): 157–83.

28 *Ward* would gain additional fame by being the first US ship to employ its guns against the Japanese in World War II, when it engaged and sank a Japanese midget submarine in the Pearl Harbor defensive zone immediately prior to the aerial attack on the US Pacific fleet on December 7, 1941.

29 On WWI shipbuilding operations in the Bay, see Louis Hough, *A Fleet to be Forgotten: The Wooden Freighters of World War One* (San Francisco: San Francisco Maritime History Press, 2009).

accommodate passengers seeking luxury accommodations to and from the Orient.³⁰

The myopic nature of extreme isolationism soon became apparent. Hostilities in Europe and elsewhere in the mid-1930s changed American mercantile policy dramatically. In 1936, Congress passed the Merchant Marine Act, “a legislative landmark of unrivaled importance in the history of US maritime policy.”³¹ Recalling that four-fifths of the tonnage authorized in World War I arrived after that conflict was concluded, President Franklin D. Roosevelt called for “a merchant marine sufficient to carry a substantial portion of the waterborne export and import foreign commerce of the United States on the best equipped, safest and most suitable type of vessels owned, operated and constructed by citizens of the United States, manned with a trained personnel and capable of serving as a naval and military auxiliary in time of war or national emergency.”³²

The Merchant Marine Act formally recognized the importance of the maritime industry to the commercial prosperity and military security of the United States. Under various iterations of this law, American shipbuilders contracted to build anywhere from fifty to two hundred vessels per year. The act also acknowledged the need for federal assistance to keep the industry viable in the face of international competition. Following passage of the legislation, shipbuilding subsidies were established, and government-initiated ship production commenced in 1939, employing thousands at ten West Coast shipyards alone.³³

The events that made the United States a combatant in World War II led to a heightened pace of activity in West Coast shipyards. Between 1939 and 1945, the 10 West Coast shipyards grew to 26, as the number of ways increased from 25 to 163. The Bay Area in particular had several notable things going for it: a history of shipbuilding operations, proximity to the Pacific theatre, a large workforce, and undeveloped waterfront real estate combined to form a perfect equation for shipbuilding in the region. Nationwide, over 600,000 people were employed at close to 70 shipbuilding facilities: in the five years after 1940, American shipyards produced 4,600 vessels. West Coast yards were especially productive, combining to build 2,257 vessels, amounting to 6.3 million tons, or 45 percent of the total merchant ship tonnage (and 27 percent of all warship tonnage), in the United States during WWII.³⁴ To take but one example, by the end of 1945, Marinship Corporation (founded in Sausalito in 1942) and its workforce of 22,000 had delivered 93 vessels—mainly tankers but also assorted craft that included Liberty ships and a large number of invasion barges—to the Navy and Maritime Commission.³⁵

30 See Lawrence C. Allin, “Ill-Timed Initiative: The Ship Purchase Act of 1915,” *American Neptune* (July 1973): 179–98.

31 Andrew Gibson and Arthur Donovan, *The Abandoned Ocean: A History of American Maritime Policy* (Columbia: University of South Carolina Press), 141.

32 Merchant Marine Act of 1936, http://www.law.cornell.edu/uscode/html/uscode46a/usc_sup_05_46_10_27.html.

33 See Michael Lindberg and Daniel Todd, *Anglo-American Shipbuilding in World War II: A Geographical Perspective* (Westport, CT: Praeger Press, 2004).

34 A nice visual treatment of this work can be found in Wayne Bonnett, *Build Ships!: San Francisco Bay Wartime Shipbuilding Photographs* (Sausalito: Windgate Press, 1999).

35 Charles Wollenberg, *Marinship at War: Shipbuilding and Social Change in Wartime Sausalito* (Berkeley: Western Heritage Press, 1990). Among the ships were 62 tankers, 16 oilers, and 15 Liberty cargo carriers. Located in Sausalito’s Richardson Bay, the first vessel to be launched was the eponymous *William A. Richardson*. The yard launched one vessel every thirteen days: the tanker *Huntington Hills* was launched in just thirty-three days, half the time required for comparable craft.

All told, World War II shipbuilding was perhaps the greatest combined effort of government and private industry in the nation's history.³⁶

As a carryover from World War I, the United States already had a large fleet. It also had experience with wartime shipbuilding. Nonetheless, the scale of World War II shipbuilding efforts reached unprecedented levels, with consequences far beyond the shipyards, affecting the geographic location of the population and the work experience of minority and especially women workers.³⁷ The shipbuilding frenzy of World War II also had a long-lasting effect on coastal and inland shipping. During the war years, the military demand for ships meant that domestic trade was shifted to rail and trucking. After the war, these alternative modes of transportation came to dominate.

Among the notable individuals responsible for these developments was Henry J. Kaiser. Scion of a German American family, Kaiser had a background as a general contractor and soon founded a fledgling dynasty. During World War I, his family based their business in Vancouver, British Columbia; with the return of peace, anti-German feelings had abated to a level where the family felt secure in returning to the States. Arriving in the Bay Area in 1921, Kaiser turned his attention to massive municipal projects. He built roads in Cuba, levees along the Mississippi River, and dams (such as the Boulder, Bonneville, and Grand Coulee) throughout the American West.³⁸ But it was during the national crisis of the World War II that this visionary and entrepreneur made a lasting mark on American history, creating an integrated system of work and living spaces at his shipyards while integrating a social-service network (including health care and child care) into industrial work ways.³⁹ Treeless Richmond, with its deepwater access and ample space for warehousing, became a favored location for building ships and housing, its yards alone employing 100,000 workers. They were not alone, as an additional 45,000 labored at Mare Island, with 35,000 each at Hunter's Point Naval Shipyard and at Oakland's Moore Drydock.⁴⁰

Although he was a successful industrialist, Kaiser was ignorant of traditional shipbuilding techniques; indeed, he had never built a ship before 1941. Unburdened by the limitations of vision and practices of traditional shipbuilding, Kaiser geared up for volume production. His ships were built of prefabricated modules, and then assembled in series construction reminiscent of automobile assembly lines. The shipyards, operating on twenty-four-hour shifts, seven days a week, employed hundreds of thousands. Kaiser provided optional health care (at fifty cents per weeks, over 92 percent of his workforce opted in—they would need it, since battlefield casualties trailed home-front injuries until 1943) and

36 Christopher James Tassava, "Launching a Thousand Ships: Entrepreneurs, War Workers, and the State in American Shipbuilding, 1940–1945" (PhD diss., Northwestern University 2003).

37 See Katherine Archibald, *Wartime Shipyard: A Study in Social Disunity* (Champaign: University of Illinois Press, 2006).

38 Mark S. Foster, *Henry J. Kaiser: Builder in the American West* (Austin: University of Texas Press, 1989); and Albert P. Heiner, *Henry J. Kaiser, Empire Builder: An Insider's View* (New York: P. Lang, 1989). See also the hagiographic Albert P. Heiner, *Henry J. Kaiser: Western Colossus* (New York: Halo Books, 1991).

39 On Kaiser and his impact, see Christopher James Tassava, "Launching a Thousand Ships: Entrepreneurs, War Workers, and the State in American Shipbuilding, 1940–1945" (PhD diss., Northwestern University 2003). On his relationship with the federal government, consult Stephen B. Adams, *Mr. Kaiser Goes to Washington: The Rise of a Government Entrepreneur* (Chapel Hill: University of North Carolina Press, 1997).

40 Christopher J. Tassava, "Multiples of Six: The Six Companies and West Coast Industrialization, 1930–1945," *Enterprise and Society* 4, no. 1 (2003): 1–27. On Moore Drydock, see Wayne Bonnett and James Moore, *The Story of the Moore Dry Dock Company: A Picture History* (Sausalito: Windgate Press, 1994).

child-care programs that cost just seventy cents per day (a major benefit to the veritable army of single mothers—women composed 27 percent of the shipyard workforce—then employed). Between 1940 and 1945, a half-million persons made their way across the United States to take up jobs in Bay Area shipyards, and three times that number filed out through the Golden Gate en route to the Pacific theatre, along with supplies and equipment to combat the enemy. Kaiser championed a recruitment effort seeking to relocate African Americans from the rural, agricultural South to the rapidly industrializing Bay Area. Agents were dispersed with train tickets (humorously referred to as “magic carpets”) offering the promise of a better life. Whereas African Americans composed 3 percent of the Bay Area workforce in 1942, this more than tripled by war’s end.⁴¹

The Kaiser facilities specialized in utilitarian cargo craft, known as Liberty ships, that Franklin Roosevelt derisively labeled “ugly ducklings,” but officially known as EC-1 (Emergency Cargo). Liberty ships were nothing if not prosaic. Produced at eighteen shipyards nationwide, they shared common characteristics. All were oil fired, with 2,500-horsepower reciprocating engines. Measuring 441 feet by 52 feet, they featured a slight armamentarium that left them ill equipped to outgun the enemy. With a maximum speed of 12 knots, they could not outrun much, either. The goal was to build these ships faster than the enemy could sink them (by 1942, roughly two-thirds of the approximately 1,800 Allied craft lost were victims of U-boat attack) and the shipyards responded by churning out 2,751 in just four years of production. The first, appropriately named *Patrick Henry*, was completed in 244 days: by war’s end, it was not uncommon to launch in less than three weeks. (The average was 42 days and in one ballyhooed publicity stunt, *Robert E. Peary* launched after just 4.5 days). The Richmond facility, with its 4 yards and 27 ways, alone constructed 747 ships; by mid-1943, the United States produced 85 percent of all Allied shipping. There were, however, some challenges. Brittle designs led to fracture in the icy waters of the North Atlantic, a problem solved by introducing a faster, larger, and stronger design, the Victory ship. Five hundred and thirty one of this class were built, playing a vital role in the war and serving as a crucial link through their roles as troop transports and cargo carriers.⁴²

Kaiser’s method to increase production was to mechanize and de-skill. Years of training and experience necessary to make a journeyman shipyard worker could not be condensed into a matter of days or weeks, yet the war would wait for no one. The solution was to break the complex job of building a ship into the smallest possible components, train workers to do that specific task, and gain experience through repetition. Large and small classrooms sprang up in Bay Area shipyards, teaching welding and other crafts. High-speed electric arc-welding, a skill that could be learned in a month, was used extensively for the first time instead of riveting. In the first year and a half, construction time for Liberty ships reduced from 105 to 14 days. By the end of the war, Kaiser had built one-third of the Maritime Commission’s vessels and had set the standard for other yards. From 1940 to 1945, American yards launched 4,600 ships: of this number, 1,400 came from Bay Area yards. For the 1,365 days of the war, this amounted to roughly one ship per day. A country that had constructed only 1 million tons of merchant shipping in 1941 built more than 17 million tons by 1943. By the war’s end in 1945, a workforce of 4 million men and women had

41 See Marilyn S. Johnson, *The Second Gold Rush: Oakland and the East Bay in World War II* (Berkeley: University of California Press, 1996).

42 Peter Elphick, *Liberty: The Ships that Won the War* (Annapolis, MD: Naval Institute Press, 2006).

built 5,000 ships.⁴³ The speed and the scale of the effort still defy comprehension. When operating at their peak rate of production, America's shipyards were capable of reproducing the entire world's prewar commercial tonnage in less than three years.⁴⁴

As was the case after World War I, the return of peace meant a glut of merchant ships following World War II.⁴⁵ The boom-and-bust cycle of the work engendered great social disruption, demographic change, and environmental pollution. When the shipyards closed and the defense contracts dried up, communities from Richmond to Vallejo were left to pick up the pieces. Unemployment, rising crime rates, and, later, Superfund status threatened to throw those and other communities into a tailspin of poverty and hopelessness. The dramatic degree to which much of the Bay Area depended on the maritime industry was seen in the dislocation that came with the closing of local shipyards. Many vessels were scrapped, sold, or laid up in "mothball fleets" such as the one in Suisun Bay. While some repair facilities and a few yards (most notably Mare Island Naval Shipyard and NASSCO in San Diego) have remained in business (the naval facility at Mare Island closing in 1994), for all intents and purposes, the cost of building ships in the United States became so prohibitive that it was effectively over by the 1960s, ending more than a century of such efforts in California and the West.⁴⁶

As the maritime industry modernized, becoming increasingly subject to the forces of mechanization, the men and women who made their living by sailing ships or by working in the maritime milieu also changed. Basically, maritime laborers can be split into three broad classes: licensed officers, nonlicensed seafarers, and shoreside maritime workers. Fundamental shifts in the way these individuals viewed themselves and their place in the emerging economies occurred from the 1880s on, and these new perspectives often manifested in labor activism.

The evolution of maritime labor unions can be seen most clearly along the West Coast in general, and in San Francisco in particular. Indeed, the world's first permanent sailors' unions, hardy enough to survive to the present day, were organized in the city. Given the rich history of the port, this should not be surprising. San Francisco has always been (and in many ways remains) a maritime town. Census data from the early years of the twentieth century show that San Francisco was the most maritime of all American cities, counting more maritime workers than any other municipality, including New York.

Working aboard any vessel was hard and dangerous work. Few would willingly choose to suffer the indignities of tramping from port to port in creaky vessels for low wages, or of working in the dangerous lumber trade along the Pacific Coast. Many seafarers jumped ship upon arrival in San Francisco, leading to the abandoned forest of masts associated with the gold rush, and to severe labor shortages in the maritime industry for years to come. To fill out their complement, shipmasters utilized a variety of strategies, most revolving around nefarious characters known as crimps. Working with boardinghouse masters

43 Frederic Lane, *Ships for Victory: A History of Shipbuilding under the United States Maritime Commission in World War II* (Baltimore, MD: Johns Hopkins University Press, 1951).

44 Gibson and Donovan, *Abandoned Ocean*, 166–67.

45 The standard treatment of the economic impact of the war on California, and of the return to peace, is Gerald D. Nash, *The American West Transformed: The Impact of the Second World War* (Bloomington, IN: University of Indiana Press, 1985). See also Gerald D. Nash, *World War II and the West: Reshaping the Economy* (Lincoln, NE: University Press of Nebraska, 1990).

46 John Kilgour, *The U.S. Merchant Marine: National Maritime Policy and Industrial Relations* (Westport, CT: Praeger Publishers, 1975).

and landlords (or landladies), shipping agents procured sailors for vessels departing the Golden Gate by means fair and foul.⁴⁷

To man the vessels sailing from San Francisco in the wake of the gold rush, a thriving organization of maritime labor contractors arose. These individuals solved the labor shortage by providing a necessary service, albeit one that was at the cost of those who provided the needed supply, the sailors themselves. Beginning in the 1850s and continuing for the better part of a half century (with reported cases occurring well into the 1930s), boarding-house keepers and shipping masters made San Francisco the crimping capital of the world. The waterfront neighborhood known as “The Barbary Coast” soon acquired a globally recognized bad reputation. One correspondent described it as:

The haunt of the low and the vile of every kind. The petty thief, the house burglar, the tramp, the whoremonger, lewd women, cutthroats, murderers, all are found here. Dance halls and concert-saloons, where bleary-eyed men and faded women drink vile liquor, smoke offensive tobacco, engage in vulgar conduct, sing obscene songs and say and do everything to heap upon themselves more degradation, are numerous. Low gambling houses, thronged with riot-loving rowdies, in all stages of intoxication, are there. Opium dens, where heathen Chinese and God-forsaken men and women are sprawled in miscellaneous confusion, disgustingly drowsy or completely overcome, are there. Licentiousness, debauchery, pollution, loathsome disease, insanity from dissipation, misery, poverty, wealth, profanity, blasphemy, and death are there. And Hell, yawning to receive the putrid mass, is there also.⁴⁸

Another, describing the scene on a thoroughfare known to sailors as “Terrific Street” for the enjoyments one could find there, argued:

Pacific Street is a loud bit of Hell. Three blocks of solid dance halls, there for the delight of the sailors of the world. . . . The life of the floating population lay apart from the regular life of the city. . . . The whole street, for half a dozen blocks, is literally swarming with the scum of creation. Every land under the sun has contributed toward making up the crowd of loafers, thieves, gamblers, jayhawkers, and dirty, filthy, degraded, hopeless bummers. . . . they seem to shun the light of the sun, and only crawl forward at night to feast on unclean things and fatten on rottenness and corruption.⁴⁹

Prospectors disappointed with the gold rush could be persuaded to man homeward-bound ships, but vessels destined for more exotic locales also demanded crews. Here is where crimps such as James “Shanghai” Kelly and Jimmy “Shanghai Chicken” Devine plied their trade. Frequenting waterfront bars and brothels, crimps tempted sailors with easy women, free liquor, and laudanum-laced cigars. With their targets unconscious, crimps signed them onto merchant vessels, collecting bonuses, termed *blood money*, for every body delivered. In

47 The word *crimp* is derived from the German *krimmen*, meaning “to seize or grasp with the claws or beak.”

48 Benjamin Estelle Lloyd, *Lights and Shades of San Francisco* (San Francisco: A. L. Bancroft and Company, 1876).

49 Albert S. Evans, *À la California: Sketch of Life in the Golden State* (San Francisco: A. L. Bancroft and Company, 1873).

no time, the unfortunate victim found himself heading out the Golden Gate. Since the Orient was a popular destination, the process was commonly referred to as being “shanghaied.”⁵⁰

Later, during the grain trade, crimps performed another necessary service by inducing trained hands from foreign windjammers to desert their own ships and man the new vessels being built on the West Coast, since few native lads went to sea.⁵¹ Then, in a profitable cycle, these same contractors provided replacements to the short-handed foreigners, supplying men for a price, normally amounting to two months’ pay. Here, runners lured sailors off incoming sailing ships and, after a brief stay in a boardinghouse, onto an outward bounder for a nice premium. In 1891, a committee of the San Francisco Chamber of Commerce found that \$120,000 (at some \$40 per head) of blood money had been paid the preceding year in San Francisco. In addition, the boardinghouse masters would only release a sailor after he signed over his advance, usually amounting to several weeks’ pay, but often amounting to much more (one account cited a three-month advance here in the 1870s).⁵² One contemporary described the situation:

Once the boardinghouse masters got aboard he soon got among the sailors and promised them everything if they would come and board with him—a job in the country, a job in the mint—in fact anything. He always carried a bottle of chain lightning—one or two drinks were all they needed. Then they would leave their wages, in fact a full years pay, to the boardinghouse masters and perhaps the next day they would be shipped to Liverpool. There was a great demand for sailors, there were many ships in the bay waiting for crews. Some of the ships paid as high as \$200 blood money as well as 3–4 months board money for a crew. If they did not have sailors enough for a crew they would fill in with greenhorns who had been drilled in what to say to the captain. There would be 4–5 sailors and the rest greenhorns. This made up the crew . . . their outfit consisted of a “donkey’s breakfast” (straw mattress), suit of oilskins, and a pair of rubber boots. The boardinghouse master bid them goodbye and that was the last the sailor would see of him.⁵³

Once aboard ship, life was scarcely better; brutalities were notorious. While by no means a recent phenomenon (both Herman Melville and Richard Henry Dana, Jr., attested to the cruelties inflicted against merchant sailors in their antebellum works), the ferocity of the attacks against merchant sailors reached frightening heights in the period after the Civil War. In the last half of the century, the young men of America turned from the sea—at least as far as the forecabin was concerned—and crews were made up of indifferent sailors, landsmen, and malcontents with only a sprinkling of bona fide salts. With few trained sailors available and more greenhands aboard than ever before, captains were liberal in their application of shipboard justice. The “bucko mate” would come on board at the beginning of the voyage and “knock a few of them

50 For a highly readable account of these activities, see Bill Pickelhaupt, *Shanghaied in San Francisco* (San Francisco: Flyblister Press, 1996).

51 Men were induced to desert in order to crew outbound ships, forfeiting their pay in the process. Owners, for their part, were glad not to pay a crew while the vessel was awaiting and loading cargo.

52 Robert Ramsay, *Rough and Tumble on Old Sailing Ships* (New York: D. Appleton and Company, 1930).

53 James Roxburgh, “Recruiting Lodgers to the Sailor’s Boarding House,” *South of Market Journal* (July 1933): 9.

down at the first shadowy show of insubordination.” The widely held belief was that discipline had to be thrust upon the untrained sailors to ensure the safety of the ship and its cargo. Some went to extremes and their ships became known as hellships, but in general, these men were simply hardworking and proud of their ships. One contemporary sailor ruefully remembered:

In all that pertained to a smart, shipshape appearance aloft and allow, the officer from Maine or Massachusetts always showed himself a superseaman; and if he was called a bucko and a slave-driver he never spared himself, and his efforts were all for the honour of his ship. . . . His pride in his ship was his ruling passion and he often went to unheard of lengths in his efforts to uphold his reputation for smartness. As a seaman of the times put it, “on board those downeast and blue-nose (Nova Scotia) craft, where discipline is enforced by a plentiful use of a belaying pin, knuckle duster and boot, the work done is stupendous, and the ship is certainly kept in a wonderfully trim state.”⁵⁴

While this seemed to excuse or palliate the horrid treatment of sailors, others spoke out against these conditions, chastising shipping companies for employing brutal masters and for paying wages that failed to attract competent sailors.

Our shipowners complain of the lack of good material for which to make up crews for the merchant service, and yet they countenance and defend a system which tends to drive seamen who have any self-respect out of the service. If they would show by their actions that they regard the sailor as a man, with a man’s feelings and a man’s rights . . . and protect him in his rights . . . they might in the course of time find a better class of men enlisting in the service, and even those at present in it would become better and more efficient seamen than they are now.⁵⁵

In addition to being crewed by novices, many of these craft were manned by immigrants. Whereas earlier generations of seamen could count a heady number of Americans in their ranks, by the 1880s, only the officers and a sprinkling of sailors not amounting to more than one out of five were identified as such. Samuel Elliott Morrison states that “Yankee workmen built the clipper ship, but they were not manned by Americans.”⁵⁶ A citation from the *Coast Seaman’s Journal* points out the schism between the American officer and the many foreign nationals who were the sailors on the New York and New England owned clippers and Downeasters: “American boys do not go to sea, as a rule, except by reason of family ties, and are assured of being in a short time the officers of vessels; and in the short time they do serve as boys they are kept aft. By such means they learn to look upon men in the forecabin somewhat in the same way as the young

54 Basil Lubbock, *The Downeasters: American Deep-water Sailing Ships, 1869–1929* (New York: Dover, 1987).

55 *San Francisco Bulletin*, February 10, 1865.

56 Samuel Elliott Morrison, *A Maritime History of Massachusetts, 1783–1860* (New York: Houghton Mifflin, 1922).

southerner was trained to look upon the negro.”⁵⁷

The inherently dangerous nature of the industry caused maritime workers to bond together into collective bodies. Among the first maritime unions for nonlicensed sailors was the Coast Seamen’s Union (CSU), established along the lumber piles of the Folsom Street Wharf in March 1885.⁵⁸ The sailors who plied the lumber schooners along the West Coast were doughty and grizzled veterans, known as “the Scandinavian navy.” Disproportionately composed of Danes, Finns, Swedes, Norwegians, and other northern Europeans (along with a healthy sprinkling of other nationalities) this workforce had shared ethnic roots, and a history of syndicalism and working-class solidarity that proved vital in these formative years. Founded by Polish immigrant Sigismund Danielwicz and Irishman Frank Roney, the CSU protected its members from the capricious labor market while improving conditions on ships that worked the coastwise trade.⁵⁹ The following year, a separate organization, the Steamship Sailors Union, was founded to protect the rights and interests of crews employed on coastal steam schooners. By 1891, the two organizations came together to form the Sailor’s Union of the Pacific (SUP) and within three years, SUP, the self-proclaimed “lookout of the labor movement,” affiliated with the American Federation of Labor. Their goals never wavered: higher wages, an end to involuntary servitude and corporal punishment, and a commitment to better forecastle conditions.⁶⁰

In its early years, the SUP was fortunate to have found a leader who was totally committed to the goals of the union. Andrew Furuseth, a dour Norwegian born in 1854, emigrated to the United States in 1880. Elected SUP secretary in 1887, the craggy and ascetic Furuseth set himself against the shipowners and their periodic attempts to lower wages and hire nonunion crews. Boardinghouses that catered to nonunion sailors, like that at 334 Main Street owned and operated by the notorious crimp John Curtin, were picketed and, in one high-profile crime, dynamited. Throughout the 1890s and into the new century, the waterfront was wracked with pitched battles when a sailing ship or steamer tried to sail without a union crew. In 1901, a major strike occurred, and in 1902, the SUP won full recognition from the shipowners.⁶¹

57 *Coast Seaman’s Journal*, November 9, 1889. The demarcation between forecastle and cabin was far less marked on the Pacific coast, where a large proportion of the mates and masters had been sailors themselves. Many of the officers of this fleet had come to San Francisco as sailors in Cape Horn square-riggers and then jumped ship. Finns, Danes, Swedes, Norwegians, and Germans joined coastwise vessels here, then worked their way up, starting as donkey men, winch driver or quartermaster. They “came aboard through the hawespipe, and not through the cabin windows” to quote an old sea expression. As a result, an egalitarianism was found on the Pacific coast that was largely missing from East Coast seafaring. James C. Healey, *Foc’sle and Glory Hole: A Study of the Merchant Seamen and his Occupation* (New York: Merchant Marine Publishers Association, 1936). See Stephen Schwartz, *Brotherhood of the Sea: A History of the Sailors Union of the Pacific, 1885–1985* (New Brunswick, NJ: Transaction Books, 1986).

58 Earlier organizations, such as the Marine Engineers Beneficial Association (1875) and the Master’s, Mates, and Pilots (1880) protected the interests of licensed officers. David F. Selvin, *Sky Full of Storm: A Brief History of California Labor* (San Francisco: California Historical Society, 1975).

59 Paul Schuster Taylor, *The Sailor’s Union of the Pacific* (New York: Arno Press, 1971). On Roney, see Ira B. Cross, ed., *Frank Roney: Irish Rebel and California Labor Leader* (Berkeley: University of California Press, 1931).

60 Deepwater sailing vessels were never adequately organized, and ocean steamships only partially, beginning with the WWI shipping boom. See Stephen Schwartz, *Brotherhood of the Sea: A History of the Sailors Union of the Pacific, 1885–1985* (New Brunswick, NJ: Transaction Books, 1986).

61 John Elrick. “Social Conflict and the Politics of Reform: Mayor James D. Phelan and the San Francisco Waterfront Strike of 1901,” *California History* 88, no. 2 (2011): 4–23.

While the SUP was certainly willing to make their points with protests and violent demonstrations, Furuseth was equally at home in the halls of legislature, working increasingly in Washington, DC. His first legislative victories were the Maguire and White Acts, coming after public opinion was aroused by a listing of the brutalities aboard the Downeasters in the Cape Horn trade.⁶² The Maguire Act, sponsored by San Francisco politico James Maguire, allowed sailors to quit vessels without penalty when they feared for their personal safety. The White Act theoretically abolished corporal punishment and did away with the penalties for desertion. Such brutalities—including many that went unpunished by the courts—were published in “The Red Record” in the union paper, the *Coast Seamen’s Journal*, beginning in 1895.⁶³ Furuseth had another success when, in 1907, Senator Alger of Michigan introduced a bill that became law, “An Act to Prohibit Shanghaiing in the United States.”⁶⁴ Still, challenges remained.

In 1897, the same Supreme Court that had endorsed legal segregation (*Plessy v. Ferguson*) argued in the *Arago* decision (*Robertson v. Baldwin*) that seamen were not covered by the Thirteenth Amendment, and that a sailor could “surrender his personal liberty.” The court’s reasoning was condescending, stating that “seaman are deficient in that full and intelligent responsibility for their acts which is accorded to ordinary adults, and need the protection of the law in the same sense in which minors and wards are entitled to the protection of their parents and guardians.”⁶⁵ For the better part of the next two decades, Furuseth and the SUP would work tirelessly to overturn this decision.

In 1915, Furuseth won his greatest victory with the Seaman’s Act (“An Act to promote the Welfare of American Seamen in the Merchant Marine of the United States”), sponsored by Senator Robert M. La Follette of Wisconsin. This act, alternatively called the “Emancipation Proclamation for Sailors” and the “Magna Carta of the Sea,” was the breakthrough for American maritime labor, greatly improving the conditions of men living before the mast, and establishing a hiring system ending crimping. It was a tremendous achievement not only for the SUP but also for progressives and the labor movement in general. As a testament to his success, Furuseth was present at the Versailles Treaty in 1919, and although he was elected president of his union (a post he held from 1908 until 1938), he never drew a salary greater than that paid to an able-bodied seaman.⁶⁶

The Seaman’s Act of 1915 was a colossal victory for the SUP, but challenges remained. Although World War I brought higher wages for most maritime workers, the return of peace met with spiraling inflation, high unemployment rates, and declining wages. Strikes in 1919 and 1921 were miserably unsuccessful, and tainted with radicalism. Association with groups such as the International Workers of the World (IWW, or “Wobblies”) did

62 The Dingley Act of 1884 had already prohibited advancements against a seaman’s wages, and limited the making of seaman’s allotments to close relatives, though a loophole effectively emasculated this law.

63 “The Red Record” listed sixty-four cases of abuse (including fourteen murders) that occurred on ships from 1887 to 1894. Tellingly, forty of these cases originated on San Francisco-based vessels.

64 By this time, the SUP could boast over 3,500 members, three-fifths of whom were listed as “Scandinavian or other Northern European” and a war chest approaching \$50,000. William Martin Camp, *San Francisco: Port of Gold* (New York: Doubleday, 1948), 249.

65 While the Maguire Act outlawed the imprisonment of sailors who deserted the coastwise trade, no such protection existed for American and foreign sailors engaged in international commerce.

66 On Furuseth, see Hyman Weintraub, *Andrew Furuseth: Emancipator of the Seamen* (Berkeley: University of California Press, 1959). Furuseth was succeeded as secretary by another Norwegian, Harry Lundeberg.

much to discredit the SUP and led to plummeting membership rolls. It would also set the stage for a violent strike in 1934.

Before discussing that event, we must first recognize the struggles of shoreside maritime workers. Individuals who worked “along the shore” and who were responsible for loading and offloading vessels had organized themselves into collective bodies as early as 1853, when the Riggers’ and Stevedores’ Union was formed in San Francisco. Many of those drawn to this occupation were without viable options. As one observer reminisced: “Stevedores are a large body of men who are 99% driftwood from all walks of life . . . when a young man meets with disappointment and finds himself out of work he naturally migrates to the Embarcadero.”⁶⁷

Discharging lumber from a sailing ship, for example, was as time-consuming and dangerous as loading and sailing such a craft. Usually taking several weeks, longshoremen suffered assorted workplace accidents and were routinely crushed between shifting cargo.⁶⁸ Within forty years, the International Longshoreman’s Association (ILA), represented the group, protecting waterfront workers from dangerous work conditions and arbitrary hiring practices. In the Australian-born Harry Renton Bridges, the ILA and its successor, the International Longshoreman’s and Warehouseman’s Union (ILWU), had found a leader who rivaled Furuseth.⁶⁹ Turning his back on his family’s real-estate business, Bridges embraced the adventurous spirit and socialist views of his uncle. Entering the merchant marine at age sixteen, he migrated to the United States in 1919, settling in San Francisco during the tumultuous post-WWI years. A member of both the SUP and the IWW, he joined the ILA in 1922.

Among the most abused of all maritime workers, longshoremen needed a visionary like Harry Bridges. West Coast ports had a reputation for efficiency, but were notoriously dangerous workplaces. For example, during the 1920s, San Francisco longshoremen faced 200 to 400 disabling injuries for every million man hours worked, equating to between three and six disabling injuries per eight-hour shift for the roughly 2,000 longshoremen operating in the city. Accident rates (17.5 percent) were higher than for any other occupation (nationwide they ran 10.5 percent), and mechanization did not help this. During the four years of the American Civil War (1861–1865), 1,018 maritime workers lost their lives; in approximately the same amount of time almost a half century later (1909–1914), 5,445 died.⁷⁰

The finger piers that dominated the waterfront during the time of break-bulk operations, with their twin cargo booms and steam winches, employed hundreds of men to load

67 “The Stevedore on San Francisco’s Waterfront: Recollections of Senator Jack Maloney,” *South of Market Journal* (September 1933): 9.

68 On waterfront union activism, see David F. Selvin, *A Terrible Anger: The 1934 Waterfront and General Strikes in San Francisco* (Detroit: Wayne State University Press, 1996); and Bruce Nelson, *Workers on the Waterfront: Seamen, Longshoremen, and Unionism in the 1930s* (Champaign: University of Illinois Press, 1988).

69 On Bridges, see Charles Larrowe, *Harry Bridges: The Rise and Fall of Radical Labor in the United States* (New York: Lawrence Hill and Company, 1977).

70 Boris Stern, *Cargo Handling and Longshore Labor Conditions* (Washington, DC: GPO, 1932).

and unload vessels.⁷¹ Longshoremen toiled long hours, in dangerous conditions, and with little job security. For most West Coast longshoremen, hiring was for the day and the job, through humiliating “shape-ups” (that favored cronyism and kickbacks) or through corrupt “blue-book unions” (managed and controlled by the shipping companies). The anti-union climate of many policymakers, as evidenced by the post–World War I Red Scare and the Palmer Raids of May 1920, followed by the economic crisis of the Great Depression, further hampered the efforts of laboring men to organize themselves into collective bodies. Local strikes called by the International Seaman’s Union and the International Longshoreman’s Association (1916, 1919, and 1921) were unsuccessful, as regional and local affiliates jealously guarded their own territory and resisted any common action to improve their situation. Efforts at coordinated actions led to a coastwise work stoppage that began on May 9, 1934, although the strike’s real center was in San Francisco.

During this epic struggle, the ILA sought a coastwise contract, with the same wages and conditions in all ports, and recognized the union as the bargaining agent for the contract. Additionally, they sought a six-hour day and a thirty-hour week, in an effort to employ as many of their members as possible in the depressed economy. The ILA wanted an hourly wage of \$1, with a fifty cent addition for overtime; most important, they sought preferred employment for ILA members through a union-controlled hiring hall separate and distinct from the “shape-up” that had been in place for years. The longshoremen were joined in their strike by several other maritime unions, including the SUP.⁷²

On July 3, the Industrial Association, a group of waterfront employers, attempted to break the strike by employing non-union workers to move cargo from ships docked in San Francisco. The strikers resisted violently, attacking convoys and throwing rocks and bottles at the strikebreakers and their police escorts. Although the port closed the following day for the Fourth of July, many anticipated violence in the future. Governor Frank Merriam called out the National Guard to keep the peace, and machine-gun nests were promptly erected along the waterfront. On July 5, a running gun battle between strikers, police, and national guardsmen resulted in the death of two protesters, Howard Sperry and Nicholas Bordoise. An additional 32 were injured by gunfire, and 75 more were wounded by teargas, clubs, or other weapons. July 5 is still remembered as “Bloody Thursday” in West Coast ports.⁷³ The San Francisco Labor Council called for a general strike to begin on July 16; lasting four days, it drew widespread sympathy and 120,000 participants, virtually shutting down the city.⁷⁴

71 A typical break-bulk carrier of 500 feet could accommodate 700 railroad cars’ worth of freight. The ship’s crew was often idle and alongside as gangs of longshoremen worked to unload the cargo. Roy S. MacElwee and Thomas R. Taylor, *Wharf Management: Stevedoring and Stowage* (New York: D. Appleton and Company, 1961). For a good first-person perspective of working conditions facing San Francisco longshoremen, consult Otto Hagel and Louis Goldblatt, *Men and Machines* (San Francisco: International Longshoreman’s and Warehouseman’s Union and the Pacific Maritime Association, 1963).

72 Others included the Masters, Mates, and Pilots, the Marine Engineers Beneficial Association, the Communist-affiliated Marine Worker’s Industrial Union, and the Marine Cooks and Stewards. Founded in 1901, the Marine Cooks and Stewards Union was—along with the ILA/ILWU—among the only maritime labor organization open to African Americans.

73 *San Francisco Daily News*, July 6, 1934. For first-person accounts, see Harlan Soeten, “A Seaman Remembers the San Francisco Waterfront, Circa 1930,” *Sea Letter* 58 (Summer 2000):14–19, and Harlan Soeten, “A Seaman’s History of the San Francisco Waterfront in the 1930s,” *Steamboat Bill* 45, no. 4 (Winter 1988): 257–69.

74 Mike Quin, *The Big Strike* (Olema, CA: Olema Publishing Company, 1949).

Eventually, federal arbitrators intervened, and the ILA received almost all it sought, including the union-controlled hiring hall.⁷⁵ Fresh off this victory, Pacific coast maritime workers formed the Maritime Federation of the Pacific Coast, a central body for all West Coast maritime unions. Strikes in 1936 and 1937 reaffirmed the gains of the 1934 strike, leading to further gains for workingmen, such as SUP control over a hiring hall and limits on sling-load weights for longshoremen. Subsequent work stoppages, such as the lengthy 1948 walkout, showed the strength of the California unions.⁷⁶

Maritime unions such as the ILWU and SUP confronted a new reality in the post-World War II world as the nature of maritime commerce and labor forever changed. The advent of containerization (mechanization and modernization agreement) and the changing face of the Bay Area real-estate market spelled the end of San Francisco as a working port.⁷⁷ By 1962, when the Port of Oakland began implementing container yards, the end was already in sight. Just half a decade later, its revenues surpassed those of San Francisco, and by 1971, Oakland ranked as the second-busiest port in the world. The time-consuming and dangerous nature of break-bulk operations came to an end. Take for example, the typical 6,500-ton cargo vessel. Sixteen men worked feverishly at each hatch, loading and unloading some twenty tons per hour. Even then, it could take a crew of one hundred, divided into gangs of sixteen, five-and-a-half days to accomplish the task. Now, with containerization and mechanization, it was done in as little forty hours and the time-consuming and dangerous nature of break-bulk operations came to an end. Membership in the ILWU fell by 40 percent, and membership in the SUP dwindled to less than three hundred by the 1980s. Still, as was seen during well-publicized lockout of 2002 and antiwar protests of 2008, West Coast shipping stops cold without the vital contributions of maritime workers.

Also essential to California's maritime history is the contribution of US Navy and Coast Guard personnel. Their story will be told in the next chapter, as will that of recreational uses of California waterways.

75 Harvey Schwartz, *March Inland: Origins of the ILWU Warehouse Division, 1934–1938* (Los Angeles: Institute of Industrial Relations, 1978).

76 In that strike, none of the nearly 27,000 ILWU members responded to government-initiated ballots that sought to end the impasse. As a result, the Waterfront Employers turned to a new agency, the Pacific Maritime Association, and allowed the ILWU to retain control over the hiring hall, limit sling-load weights, and secure a sizable raise. See Howard Kimeldorf, *Reds or Rackets?: The Making of Radical and Conservative Unions on the Waterfront* (Berkeley: University of California Press, 1992). See also Harvey Schwartz., *Solidarity Stories: An Oral History of the ILWU* (Seattle: University of Washington Press, 2009).

77 On containerization, see Brian J. Cudahy, *Box Boats: How Container Ships Changed the World* (New York: Fordham University Press, 2006); Arthur Donovan and Joseph Bonney, *The Box that Changed the World: Fifty Years of Container Shipping* (East Windsor, NJ: Commonwealth Business Media, 2006); and Marc Levinson, *The Box: How Container Shipping Made the World Smaller and the World Economy Bigger* (Princeton, NJ: Princeton University Press, 2006).

SS Red Oak Victory and Liberty Ship SS Jeremiah O'Brien

Of the several thousand merchant vessels launched from American shipyards during the World War II, two remain afloat in San Francisco Bay. Liberty ship SS Jeremiah O'Brien and SS Red Oak Victory are among the last vestiges of the prodigious output of American shipyards and are currently maintained as museum ships for education and outreach.

Jeremiah O'Brien is indicative of the utilitarian cargo ships that made up the merchant fleet during World War II. Derisively referred to as "ugly ducklings" they formed a vital bridge between the industrial might of the United States and our Allies overseas. Along with John W. Brown, Jeremiah O'Brien is one of but two remaining Liberty Ships (out of 2,751 built). Launched from the New England Shipbuilding Corporation yards in South Portland, Maine, in 1943, O'Brien is named for the Revolutionary War hero and Machias, Maine, native who captured the first British prize in that conflict. Among her earliest and most well-known voyages was participating in the D-Day invasion of Normandy: O'Brien made eleven successful crossings, bringing troops, armaments, and supplies from the British Isles to the invasion site. Following the cessation of hostilities, O'Brien was retired from service and laid up in the reserve fleet at Suisun Bay for thirty-three years. Slated for scrap in 1960, she was saved and is now preserved in San Francisco as a museum ship and memorial. Added to the National Register of Historic Places and now a National Historic Landmark, the vessel claims to be the most photographed merchant ship in the world. O'Brien steamed to Europe in 1994 to commemorate the fiftieth anniversary of the fateful D-Day invasion, the only surviving member of that expedition to have done so.

Red Oak Victory is among a handful of surviving Victory ships and is the last remaining vessel constructed at the Richmond facility. Victories, like Liberty ships, had five cargo holds, three forward and two aft: however the Victories could carry 10,850 deadweight tons, or 4,555 net tons of cargo, a much larger load than the Liberties could manage. Victory-class merchant ships typically carried a crew of sixty-two civilian merchant sailors and twenty-eight naval personnel to operate defensive guns and communications equipment. With a sleek, raked bow, raised forecastle, and cruiser stern, the Victories were at once faster, stronger, and more flexible than their predecessors. Victory ships were different from Liberty ships not only in tonnage and carrying capacity but in propulsion as well, as the steam engine of the Liberty was replaced with the more modern, more efficient, and faster steam turbine, producing between 5,500 and 8,500 horsepower and a cruising speed of 15 to 17 or more knots.

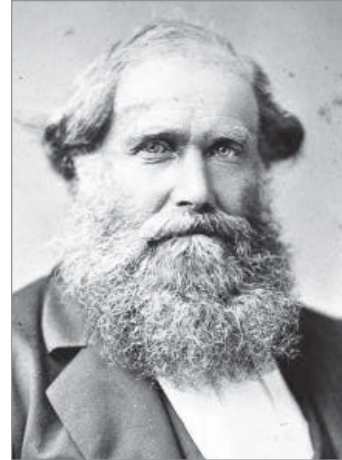
To combat hull stress, the Victory ships had their frames set thirty-six inches apart, allowing for greater flexibility and less danger of fracture. The new design worked remarkably well: the first Victory slid down the ways into the waters on February 28, 1944, launched from the Oregon Shipbuilding Corporation. All told, 531 Victories were constructed by the end of the war. These fast, large-capacity carriers served honorably in both the Atlantic and Pacific theatres: ninety-seven Victories were fitted out as troop transports; the others carried food, fuel, ammunition, materiel, and supplies, making Victory ships a critical maritime link to several theatres of war. The ships, like their Liberty predecessors were built to be expendable, but one of the most useful attributes of the Victory was cruising speed. Significantly faster than submarines, they did not have to travel as part of an inefficient convoy.

Among the 414 Victory ships built by the Kaiser shipyards was Red Oak Victory. Named for the small town of Red Oak, Iowa, this vessel commemorated a town that had the highest per-capita casualty rate in the war. Originally designated Hull #544, her keel was laid on August 15, 1944, when construction began on the ship in Richmond Kaiser Shipyard Number 1 by a crew of dedicated "Rosies." After a delayed launch—it had originally been scheduled for October 31—she was christened the SS Red Oak Victory at 10:00 on November 9, 1944, by Edna Reiley, wife of the mayor of the ship's namesake. On December 5, she was commissioned as a navy ship, USS Red Oak Victory (AK-235), by Lieutenant Commander John Sayers. After a two-week shakedown cruise, the vessel returned to the Bay Area, beginning its career as an ammunitions carrier.

One of but ten Victory ships designated as ammunition transport vessels during the conflict, the Red Oak Victory picked up its first load of 10,000 pounds of ammunition in January 1945 at Port Chicago, located in Concord, California. Despite her special designation, the Red Oak was indistinguishable from her Victory kin in size or propulsion. She served in various theatres in the Pacific during the waning months of World War II, then spent several years in the employ of the Luckenbach Steamship Company, where she worked in the intercoastal trade (and is, apparently, the last remaining ship afloat to have done so). The vessel also saw action in the Korean and Vietnam Wars. In December 1968, after twenty-four years of hard work and continuous service in which she had recorded no casualties, the Red Oak Victory was laid up in the Maritime Administration's Ready Reserve Fleet in Suisun Bay, just a short sail from where she had been launched, and just across the Carquinez Straits from where she had loaded her first cargo. There she remained for three decades.

The only surviving vessel to have served in World War II, the Korean War, the Vietnam Conflict, MARAD, and the public sector of the merchant marine, the Red Oak Victory was a logical choice for a museum ship. By act of Congress, she was turned over to the Richmond Museum Association in 1996 and transferred to her present location on September 20, 1998. When her new owners took possession of the Red Oak, she was in sad condition, riddled with holes where rust had eaten into her steel sides, her remaining paint tinted brown with rust. All the yard and stay equipment was stored below in the holds, including the massive booms and windlasses. The guns had been removed when she was mothballed. But thanks to the Rosies' careful craftwork, she was, remarkably, watertight. Still, it would take thousands of hours of volunteer services, an infusion of grant monies and lots of hard work to restore her to seaworthy condition. Thankfully, since the Red Oak Victory had been utilized in such a diverse manner, there are several generations of men and women that have come forth to help on this enormous project. Persons who had sailed on Victories, who had worked in the shipyards, had been in the Navy, or who were otherwise connected to the ship pitched in. By 2005, the Red Oak Victory had a crew of seventy-five regular volunteers, an increase of 16 percent over their usual sixty-five regularly scheduled volunteers. This equates to roughly 23,000 hours of labor and the equivalent of nearly \$1 million worth of restorative costs saved. These costs would have been impossible but were entirely avoided by gracious volunteers and generous donations.

Studio portrait of Matthew Turner, shipbuilder. Turner opened his yard in San Francisco in 1868 and relocated to Benicia fifteen years later. While in operation, Turner launched more vessels than any other builder in North America. Over half of these 228 craft—which included 12 brigantines, 4 barkentines, and over 100 schooners—were launched from Benicia.



Courtesy: San Francisco Maritime National Historical Park. Mrs. Hunt Collection. P9, 168.

Entrepreneur Henry Kaiser was arguably the most important industrialist since Henry Ford. His visionary strategy of mass-producing ships and providing for his workers' well-being catapulted the United States into a leading position as a shipbuilding nation.



Courtesy Henry J. Kaiser Pictorial Collection. Bancroft Library, University of California, Berkeley.

For most Pacific Coast longshoremen, hiring was for the day and the job, through the notorious and demeaning shape-up. In San Francisco, it took place at 7 a.m. in front of the Ferry Building.



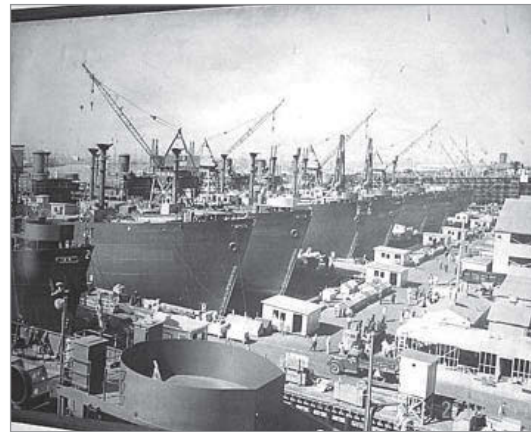
Courtesy San Francisco History Center, San Francisco Public Library.

The Red Oak Victory, berthed in Richmond, California, is one of the few remaining World War II-era cargo ships turned out by local shipyards. She is currently a museum ship and is awaiting dry-dock restoration.



Photo courtesy of author.

The ways of the Richmond Shipyard depicted during the height of their operation.



Courtesy Henry J. Kaiser Pictorial Collection. Bancroft Library, University of California, Berkeley.

A memorial to the strikers and sympathizers who participated in the waterfront protests of 1934. This mural commemorates Bloody Thursday, and can be found at the site where police killed two strikers.



Photo courtesy of the author.

Here, longshoremen march down Market Street in a show of solidarity in San Francisco's annual Labor Day parade. Harry Bridges can be seen front and center.



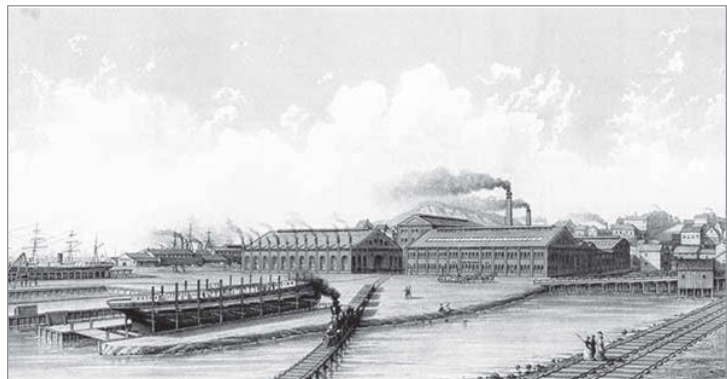
Courtesy International Longshore and Warehouse Union Archives. Anne Rand Library. San Francisco.

The effects of labor organizers along the waterfront are here depicted by muralist Anton Refregier in San Francisco's Rincon Center.



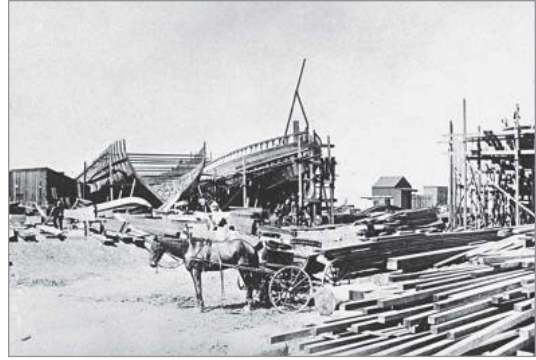
Photo courtesy of the author.

The Union Iron Works in the 1890s. Founded by Irish immigrants, the UIW represented the most important industrial activity in the San Francisco Bay region for more than forty years.



Courtesy www.pier70sf.org.

The shipyard of Charles G. White at North Beach. This scene was replayed countless times at innumerable ways that lined the San Francisco waterfront in the latter nineteenth century.



Courtesy San Francisco Maritime National Historical Park, A4.7090.

On July 5, 1934, 2 were killed, 32 wounded by gunfire, and more than 75 were seriously injured by clubs or gas.



Courtesy San Francisco History Center, San Francisco Public Library.

The shipyards offered opportunities to women and persons of color. In this 1942 photo by Dorothea Lange, “Rosies” line up for their well-earned paycheck.



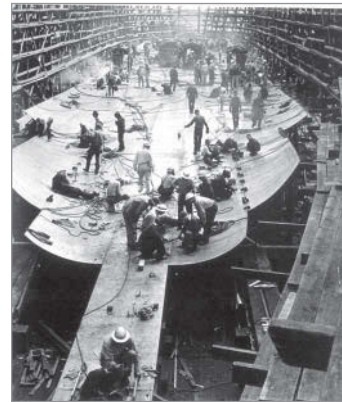
Courtesy Oakland Museum of California.
LNG 42080.4

Headquarters of the Sailors Union of the Pacific, located on East Street (Embarcadero) between Market and Mission, 1911. Notice how the union hall was surrounded by saloons, flophouses, and the like.



Courtesy Bancroft Library, University of California, Berkeley.

The frenetic pace of industrial activity is captured in this image from 1943.



Courtesy Henry J. Kaiser Pictorial Collection. Bancroft Library, University of California, Berkeley. PIC-122.

MARTIAL AND RECREATIONAL USES OF CALIFORNIA WATERWAYS

Just as indigenous Californians used the waterways of the California for diverse means, so too did the Euro-Americans who came in their wake. While we have already seen how the maritime milieu was used for resource acquisition, economic activity, and as a medium for trade and avenue of immigration, we now look at how California waterways have been viewed from military and recreational perspectives. While the Mexican-American War used California's waters as a platform for naval combat, this chapter looks at the roles played by the US Navy and Coast Guard in the region. We then close with a look at the ways that California waterways inspired others to more cultural, recreational, and hedonistic pursuits.

The predecessors of the US Coast Guard were among the most visible manifestations of federal authority in frontier California. Indeed, representatives from the Revenue Cutter Service, US Lifesaving Service, and US Lighthouse Service were ubiquitous in nineteenth-century California, enforcing federal maritime laws, collecting customs, providing rescue to those in distress, and fulfilling myriad other duties.¹ The Coast Guard, in its various iterations, played a formative role in California's maritime history. Following the Mexican-American War, a small contingent of naval personnel was responsible for many of the responsibilities more traditionally fulfilled by the various Coast Guard representatives, but with the onset of the gold rush it was obvious that they were overmatched. Beginning with the years immediately following the transfer of the region to the United States, the Coast Guard took on diverse responsibilities in San Francisco and other West Coast ports. A larger and more professional revenue marine, including state-of-the-art cutter *C. W. Lawrence*, soon arrived to relieve overburdened and undermanned naval officers from the drudgery of collecting duties and regulating ship borne commerce. Relieved naval authorities were now free to enforce law and order throughout the Bay Area and to take on other responsibilities around the state.

Lawrence arrived on October 3, 1849, and immediately took up duties as collector of customs. San Francisco was designated a "port of entry," meaning that all foreign vessels headed for any California port needed to call there first to pay customs duties and other fees. Ports of delivery, where cargos were discharged, were established at San Diego and San Pedro, though the long coastline and lack of law enforcement agents meant that smuggling was as pervasive in the American chapter of California's history as it had been in the Spanish and Mexican ones. But collection of appropriate duties and fees was just one aspect of *Lawrence's* work. In addition to enforcing customs regulations, she and her adjunct, the severely outdated *Polk*, cruised the coast, offering assistance to distressed vessels or intervening on behalf of aggrieved seamen or masters who flagged them down. To deal with these

1 The history of the US Coast Guard (USCG) can be confusing. The various agencies that compose the USCG, and the multifaceted nature of its mission are to blame. Among the first federal regulatory agencies to be commissioned, the service began in 1790, and was called, variously, the Revenue Marine or the Revenue Cutter Service. It operated under the Department of Treasury and in 1915, was joined with the US Life-Saving Service. In 1939, it added the US Lighthouse Service to its agency, and in 1946, the Bureau of Marine Inspection and Navigation. In 1967, the USCG was transferred to the Department of Transportation, and in 2002, to the Department of Homeland Security. In times of war or national emergency, the Coast Guard can be transferred to the Department of the Navy.

issues, a court of admiralty was established in 1851, replacing the irregular proceedings of local courts—often rife with fraud and embezzlement—with bureaucratic efficiency. A new customhouse likewise replaced the outdated adobe structures, themselves remnants of the Spanish and Mexican officials who predated the Americans, then in use.

Lawrence and her followers performed a variety of duties in law enforcement, revenue collection, and lifesaving operations. Notable was her work in listing various important landmarks along the Sacramento River, resulting in a series of printed charts, the first known for that waterway. The irony that the *Lawrence* itself was lost to grounding off Ocean Beach attests to the inherent danger of sailing and operating vessels in the waters of the Bay Area, even for experienced personnel.² The amount of submerged cultural artifacts and resources that litter the waters of California is further testament to this fact. The sheer number of shipwrecks listed in official registries represents not just a list of maritime tragedies, but an opportunity for in-depth study to reveal the importance of maritime affairs on the history of California and the West.

The patrol of the cutter *Argus* is illustrative of the multifaceted mission of the early Coast Guard in California: between March 8 and May 30, 1852, her crew freed one grounded vessel, quelled a mutiny on another, and boarded three ships suspected of evading revenue payments. Captain William Hunter, the senior officer of the service, commended Lieutenant William C. Pease and his crew for their dedication to duty, recognizing that “it would be impossible to smuggle goods by sea to Sacramento or Stockton, the entrance to those places being so well guarded” by the Benicia-based *Argus*.³ Another example of the numerous and diverse duties facing revenue cutter servicemen is seen in the career of the 110-foot *Golden Gate*. Built in Seattle in 1896, she entered service on San Francisco Bay on May 13, 1897, performing general law enforcement, including towing, fumigating vessels, and patrolling local regattas. During the 1906 earthquake, *Golden Gate* served as a floating bank, when gold reserves from the city’s financial institutions were transferred to her vault for safekeeping. *Golden Gate* remained in service until her decommissioning at the conclusion of World War II.⁴

These myriad duties were not the only manifestation of maritime regulation on the West Coast. Among the most pressing needs for California mariners was the establishment of aids to navigation. When the gold rush began, not a single lighthouse or other aid to navigation existed along the entire Pacific coast. In 1848, the US Congress, recognizing that such facilities were vital to maritime trade and transportation, authorized a survey to assess the coastline and determine the best locations for lighthouses, lightships, and lifesaving stations.⁵ The US Coast Survey, predecessor to the US Coast and Geodesic Survey, issued a report that recommended lighthouse service be inaugurated at several points along the coast. On March 3, 1851, Congress appropriated \$15,000 for a lighthouse

2 See James P. Delgado, “In the Midst of a Great Excitement: The Argosy of the Revenue Cutter C. W. Lawrence,” *American Neptune* 45, no. 2 (Spring 1985): 119–31.

3 Cited in Dennis Noble, “A Brief History of US Coast Guard Operations in California,” California State Military Museum, [written pre-2001], <http://www.militarymuseum.org/USCGinCA.html>.

4 Noble, “Brief History.”

5 The foremost authority on the history of California lighthouses is Ralph Shanks, *Guardians of the Golden Gate: Lighthouses and Lifeboat Stations of San Francisco Bay* (Petaluma, CA: Costano Books, 1990). See also *California’s Lighthouses: Standing Tall through Time*, a publication of *Mains’l Haul: A Journal of Pacific Maritime History* (San Diego: Maritime Museum of History, 2002); and Betty S. Veronico, *Lighthouses of the Bay Area* (San Francisco: Arcadia Publishers, 2008).

at “Humboldt Harbour.” Had it been built, it would have been the first lighthouse on the Pacific coast of the United States, but the appropriation was found inadequate and the contract canceled.⁶ Despite this setback, plans continued apace, and between 1852 and 1856, sixteen lights (lighthouses and light ships) were established along the Pacific coast from San Diego to British Columbia.

The Treasury Department awarded the contract for the first lighthouse to be built on the Pacific coast to the Baltimore firm of Francis X. Kelly and Francis A. Gibbons, and the ship *Oriole* arrived from that port late in 1852, bringing with it all the necessary crew and supplies to commence work. By December that year, the foundation for the first operating light was laid on Alcatraz Island, and two years later, it became the first functioning light on the Pacific. Others were added on the Farallones, Fort Point, Point Reyes, Point Loma, Santa Barbara, Fort Bonita, Point Pinos, Point Conception, Humboldt Harbor, Crescent City, and St. George’s Reef. The latter was a marvel of construction: built on Northwest Seal Rock (only 100 yards in diameter), it is one of the few wave swept lights in the country. With construction limited to four days per month due to tidal conditions, the 144-foot-tall lighthouse took ten years to complete, with the station finally opening in 1892. A veritable armada of workboats and sundry vessels were required to service these installations. The Lighthouse Service maintained and operated its own fleet of tenders, small craft that shuttled supplies and work parties to the scattered and isolated facilities while maintaining other lesser aids to navigation like buoys and channel markers. The tender *Shubrick* made history when it arrived in San Francisco on May 27, 1858, as the first steam-powered vessel in the service.⁷

In addition to the lighthouses, a pair of lightships operated in California waters at locations where conditions prevented lighthouse construction but where safety and security necessitated aids to navigation. These small (120-foot to 135-foot) red-hulled vessels anchored for months at a time, marking sea-lanes and shipping channels. One was based at Blunt’s Reef, near Cape Mendocino (which, in 1916, rescued 150 survivors from the liner *Bear*), and the other was at the approach to San Francisco Bay, where it inaugurated service on April 7, 1898. All shipping lines converged at the San Francisco Bay Lightship, moored thirteen miles outside the Golden Gate.⁸ Despite these precautions, navigating along the Pacific coast remains a perilous and hazardous occupation. After the collision of *Arizona Standard* and *Oregon Standard* in January 1971 off a dark and fog-shrouded Golden Gate, 20,000 barrels of oil spilled onto the Bay and immediate coastal waters and shoreline. The impact of that spill ended the discretion of captains to take ships—tugboats and barges excepted—through Racoon Straits and the South and Bonita Channels. It also prompted the establishment of the Coast Guard Vessel Traffic Service (VTS) funded through the Ports & Waterways Safety Act of 1972, which created

6 Not until 1865 did Humboldt Bay receive an operable lighthouse, a 45-foot-high masonry tower with a light visible for miles on a clear night. The structure served the needs of mariners well until it was replaced by a new lighthouse at Table Bluff in October 1892. Ralph Shanks, *Lighthouses and Lifeboats on the Redwood Coast* (Petaluma, CA: Costano Books, 1978).

7 US Coast Guard Historian’s Office, “*Shubrick*, 1857,” last updated January 26, 2012, http://www.uscg.mil/history/webcutters/Shubrick_1857.asp.

8 James Gibbs, *Lighthouses of the Pacific* (Atglen, PA: Schiffer Publishers, 1986). Excellent cultural landscape reports exist for both Port Bonita Lighthouse and Fort Point Lifesaving Station.

the VTS system for the entrance and waters of San Francisco Bay.⁹

Revenues collection and maintenance of aids to navigation were two of the missions entrusted to the Coast Guard; a third dealt with lifesaving. The US Life Saving Service was a civilian agency of the federal government whose mission it was to rescue mariners and passengers from distressed vessels and to protect the cargo and vessel itself, if possible. On June 20, 1874, Congress authorized lifesaving stations at San Francisco, Bolinas Bay, and Humboldt. Over the next four years, eight such stations were established along the California coast, beginning with the Golden Gate Lifesaving Station in San Francisco (at Ocean Beach) and the Humboldt Bay Lifesaving Station near Eureka. Of these original eight, it should be noted that six (the inaugural station at Ocean Beach and complementary ones at Southside, Fort Point, Point Reyes, and Point Bonita) were established to protect the approaches to San Francisco Bay. As late as 1929, ten separate lifesaving stations were responsible for California waters north of San Francisco, attesting to the volume of seaborne activity in the region and its inherently perilous nature. Today, thanks to increased vessel capability and, most notably, USCG aviation initiatives, there are just ten such stations responsible for the entire California coast.¹⁰

Camanche

Defense of San Francisco Bay took many forms, and was always a major determinant of national naval policy. During the American Civil War, policymakers and local authorities feared Confederate raiders would descend on the city, intent on torching the town or making off with large quantities of Sierra gold. To prevent this, harbor defenses at Fort Point and Alcatraz were strengthened as were the military installations at Mare Island and Benicia. To assuage fears that this was not enough, the Navy sent a new Passaic-class vessel, USS *Camanche* to the Bay in 1864.

The single-turreted monitor had been built by Secor Brothers of in Jersey City, New Jersey, in 1863. Disassembled, for she was not meant to be used in the open waters, she was transported around Cape Horn in the brig *Aquila*. Shortly after her arrival in the city, *Aquila* sank at the dock, taking *Camanche* to the bottom with her. Raised and reassembled, *Camanche* was launched in the waters of San Francisco Bay on November 14, 1864, exactly one year after *Aquila*'s sinking.

Commissioned just after the conclusion of hostilities, *Camanche* was the first ironclad on the Pacific, one of but two that served the region for a quarter century (the other being the twin-turreted *Monadnock*). The vessel was laid up for much of her career at Mare Island, serving briefly as a school training ship for the California Naval Militia before being sold in 1899. She served out her days as a coal barge, and her remnants are thought to lie beneath the mud near Alameda's Coast Guard Island.

9 US Coast Guard, "Sector San Francisco, Vessel Traffic Service (VTS)," last updated January 26, 2012, <http://www.uscg.mil/d11/vtssf/history.asp>.

10 The first USCG air station opened at San Diego on July 1, 1934. San Francisco inaugurated air station service on November 15, 1940.

The Coast Guard, then, played a pivotal role in securing California's waterways, and the region reciprocated. San Francisco, in particular, played the role of home port to Coast Guard crews and ships that guarded local waters as well as to those that patrolled the Arctic waters as part of the Bering Sea Patrol. Captain Michael Healy of the revenue cutter *Bear* called the city home, as did many junior and senior officers of the service.¹¹ Additionally, maritime education—such as the forerunner to the California Maritime Academy, a specialized campus of the California State University that issues licenses to merchant marine officers—became formalized in the city during this same period.¹² A California Naval Militia further supplemented the formal military establishment then in place.¹³

Just as the Coast Guard provided a variety of services to maritime professionals, so too did the US Navy, whose officers mirrored those of other nations in extolling the virtues of San Francisco Bay. From time immemorial, naval officers commented on San Francisco's attributes. Its wide, protected anchorages and extensive shorelines made it ideal for vessel construction, and its natural advantages made it a tempting target that called out for defense. Shortly after acquiring the region from Mexico, the US Navy, led by Commander Cadwalader Ringgold, undertook a "laborious and toilsome duty of surveying a vast unknown sea, buoying out the channel and removing the many obstacles attending intercourse with the mines."¹⁴ While that agency—described by historian James Delgado as "a major presence . . . and the mightiest representative of federal power in, California"—it was the Army and its Corps of Engineers that undertook improvements to the dated harbor defenses at Alcatraz and Fort Point.¹⁵ The navy sloop *Warren*, meanwhile, anchored in the waters off Benicia, served as a holding cell for dozens of recalcitrant deserters and mutinous sailors, and a government arsenal located in that town provided ample ammunition should harbor defenses be put into action.

To meet the demands of shipping and defense, the Navy opened a large shipyard and repair facility at Mare Island in 1853. As the first and only naval dry dock on the Pacific coast, the North Bay fixture ensured that San Francisco was capable of producing and repairing vessels to project American power throughout the Pacific. Subsequent and ancillary facilities were located at Hunter's Point, Port Chicago, Treasure Island, and elsewhere during World War II.¹⁶ Indeed, despite its contemporary reputation as a haven for peace activists, the Bay Area was once home to a robust military presence, one on whom the communities relied on a major employer. The

11 On Healy, see Dennis Noble, *Captain "Hell Roaring" Mike Healy: From American Slave to Arctic Hero* (Gainesville: University Press of Florida, 2010).

12 Douglas K. Peterson, "A Brief History: The California Maritime Academy," 2006, Campus History Collection, CMA Historical Archives.

13 On the California Naval Militia, see Mark J. Denger, "History of California State Naval Forces," last accessed April 24, 2012, www.militarymuseum.org/CNM.html. See also Charles Bencik, "San Diego Naval Militia," *Mains'l Haul: A Journal of Pacific Maritime History* 30, nos. 1–3 (1994): 15–23, 14–18, 6–10.

14 Alan Fraser Houston, "Cadwalader Ringgold, US Navy: Gold Rush Surveyor of San Francisco Bay and Waters to Sacramento, 1849–1850," *California History* 79, no. 4 (Winter 2000): 208–21, quotation on 213.

15 John Arturo Martini, *Fortress Alcatraz: Guardian of the Golden Gate* (Berkeley: Ten Speed Press, 2004), 3.

16 The facilities at Hunter's Point were converted from commercial to military use. The US Navy took over the property in 1940, ending nearly a century of private ownership. The previous owners had received government endorsement for the expansion of the facility—at one point, the largest dry docks in the world—in exchange for the military's option to purchase the property in case of national emergency.

facilities at Mare Island deserve special attention.¹⁷

Mare Island is a four-mile-wide spit of land located on the Napa River, near the present-day community of Vallejo. Surveyed by Perez Ayala during his 1775 reconnaissance of the bay, it was known as “Isla Plana” (Flat Island) until 1835. In that year, a crude ferry carrying livestock was caught in a squall while crossing the Carquinez Straits. The animals panicked, causing the ferry to capsize, with the presumed loss of much of the cargo. Several days later, a prized white mare belonging to the Mexican comandante of Northern California, Mariano G. Vallejo, was found living on Isla Plana. Upon finding the mare, General Vallejo renamed the island to “Isla de la Yegua,” or, as it is known today, Mare Island.¹⁸

Less than two decades later, Commodore John Drake Sloat was ordered by the Secretary of the Navy to determine a site for the United States’ first Pacific naval station. Having claimed California for the United States four years earlier, Sloat was intimately familiar with the possibilities, and recommended Mare Island, “free from ocean gales and floods,” to his superiors. When the government approved Sloat’s recommendation in 1852, the Department of the Navy purchased the island for \$83,410 from its joint owners, G. W. P. Bizzell, H. Aspinwall, and Mary S. Macarthur, making Mare Island the first permanent US naval installation on the West Coast.¹⁹

After purchasing the land, the Department of the Navy ordered the construction of dry dock for Mare Island at a cost of \$610,000. The dry dock, constructed in New York, was built in sections so that it could be shipped around Cape Horn. By fall 1853, the basin for the dry dock was completed and the dock was in place. However, because the Navy could not take over until 1854, crews were authorized to undertake private contracts in the interim. Thus, the first vessel to utilize the Mare Island facilities was a commercial steamer, *Pacific*.²⁰

In September 1854, Commodore David Glasgow Farragut arrived with his family to commission Mare Island. Upon his arrival, Farragut immediately took command of Mare Island with the charge of creating a shipyard to support the Pacific fleet. During his tenure, Farragut continued overseeing the creation of Mare Island and ship maintenance operations. In 1856, much to Farragut’s pleasure, Congress appropriated the necessary funds for the construction of a vessel at Mare Island. On March 3, 1859, the USS *Saginaw*, a four-gun, steam-driven gunboat was christened at Mare Island. *Saginaw* was the first of 513 vessels built during Mare Island’s service. Farragut did not get to see Mare Island’s first vessel (he was transferred to Washington, DC, in July 1858), and little did he know that his groundwork would be the foundation of what would eventually become the largest station of its kind in the nation.

While the Mare Island yard built and repaired various naval and merchant craft, residents of San Francisco feared the installation might be insufficient to protect the city or, worse yet, might actually encourage an attack. During the American Civil War, worried Californians petitioned Washington for an increased naval presence that took the form of an

17 On Mare Island, see Sue Lemmon and E. D. Wichels, *Sidewheelers to Nuclear Power: A Pictorial Essay Covering 123 Years at the Mare Island Naval Shipyard* (Annapolis, MD: Leeward Publications, 1977).

18 Arnold Lott, *Long Line of Ships: Mare Island’s Century of Naval Activity in California* (Annapolis: United States Naval Institute Press, 1954), 5.

19 Mark J. Dengler, “Mare Island: A Navy Yard is Born,” California State Military Museum, n.d., <http://www.militarymuseum.org/Mare%20Island.html>.

20 Ironically, before the Mare Island facilities were completed, naval ships were forced to seek repairs at the Benicia depot and foundry operated by the Pacific Mail Steamship Company.

ill-fated monitor, *Camanche*.²¹ When this vessel failed to live up to expectations, representatives from the Russian navy were dispatched for a lengthy stay in the region, much to the relief of nervous Bay Area residents.²²

The years following the Civil War proved to be very exciting for Mare Island. In 1891, the facility's first self-made dry dock was completed after nineteen years of work. The 525-foot dry dock was built on a foundation of cut granite rocks. The graving dock was the first of many constructed at Mare Island and greatly increased the productivity of the yard. However, because the majority of US Navy vessels were stationed on the East Coast, many vessels serviced at the naval yard were not American. In fact, many were owned by future rivals of the United States, such as Russia and Japan.

Besides repairing other vessels, Mare Island also found itself acting as the headquarters for civil defense and emergency response for the West Coast. In effect, from the late 1800s until the early 1900s, Mare Island was the federal government's forward operating base. For example, it was Mare Island that dispatched warships to put down Indian uprisings in the Pacific Northwest. When political instability threatened the overland flow of American goods across Central America, Mare Island sent ships to ensure the safe passage of American goods and citizens from the Caribbean to the Pacific. Mare Island also mounted several rescue missions to the Arctic during this time, and in the aftermath of the San Francisco earthquake of 1906, Mare Island sent men, supplies, and ships to help search-and-rescue and fire-suppression operations within the city.²³ Ultimately, if there was a need for military or humanitarian assistance anywhere on the West Coast or on the Pacific Ocean, the resources of Mare Island had a good chance of being involved.

During the postwar years, the naval station received a variety of improvements. In 1869, the station's hospital, which would become famous internationally for its work with prosthetics during World War II, was completed. The navy's first interdenominational church, St. Peter's Chapel, was dedicated in 1901; today, it features the largest collection of Tiffany stained-glass windows in the United States. That same year, the station switched from coal to oil for power. The change not only saved the yard money but also provided a cleaner living environment for those in Vallejo. Spectators from all around the Bay Area came to marvel at the new clean energy source.

It was also during this time that Mare Island entered into the world of submarine warfare, one of the cornerstones of the installation for years to come. In 1900, the navy purchased its first submarine, *Holland*, and set out to create its own fleet. Two of these submarines, *Grampus* (A-3) and *Pike* (A-4), were laid in San Francisco by Union Iron Works. *Grampus* and *Pike* were later commissioned at Mare Island in 1903, thus beginning a long relationship with the submarine force.

Five years later, the Mare Island facility again entered uncharted waters in American naval history. On January 4, 1911, USS *Pennsylvania* entered the dry dock for alterations involving the addition of a flight deck. A mere two weeks after *Pennsylvania's*

21 Robert Ryal Miller, "The *Camanche*: First Monitor of the Pacific," *California Historical Society Quarterly* 45 (1966): 113–24.

22 C. Douglas Kroll, "Friends in Peace and War": *The Russian Navy's Landmark Visit to Civil War San Francisco* (Washington, DC: Potomac Press, 2007).

23 Freeman, Frederick N., "California Naval History, The Navy and the Earthquake and Fire of 1906, A Report by Lieutenant Frederick N. Freeman April 30, 1906," California Military Museum, <http://www.militarymuseum.org/PerrySFEarthquake.html>.

arrival, a platform 133 feet, 7 inches long, and 31 feet, 6 inches wide was constructed over the deck. Then, on January 18, 1911, Eugene B. Ely started his Curtiss biplane at Selfridge Field at the San Francisco Presidio, and after circling the ship, landed on *Pennsylvania's* flight deck at forty miles per hour. Ely's landing marked the beginning of naval aviation as we know it today. By the time the first decade of the 1900s came to a close, Mare Island had established itself as one of the premier naval installations on the West Coast. The infrastructure, sailors, shipbuilders, and marines of Mare Island had set themselves apart in the best traditions of the naval service, and as World War I drew closer, Mare Island would become a more important asset than ever to the United States.²⁴

World War I proved to be a time of innovation, and expansion for Mare Island. It was during this time, that the facility came of age as the primary naval shipyard for the US Pacific fleet, again making breakthroughs in naval technological history. Expansion began with the completion of a second dry dock in 1910. The structure, the largest dry dock at Mare Island up until that point, was 750 feet long and took ten years to complete. The new facility would be key to much of the advancement produced at Mare Island. The first major project undertaken at the updated shipyard was the launching of USS *Jupiter*. Laid on October 18, 1911, the vessel was commissioned two years later as the first electronically driven vessel in the United States Navy. *Jupiter* later became the first American naval vessel to utilize the Panama Canal, and in 1920 was recommissioned as USS *Langley*, America's first aircraft carrier. During that same period, the Mare Island yard turned out USS *Ward* in seventeen days, setting the stage for the rapid shipbuilding techniques that later industrialists would perfect.

But while day-to-day shipbuilding and maintenance provided the bulk of the work on Mare Island, the shipyard's submarine building ultimately made the facility famous. In 1916, Mare Island was appropriated \$5 million to begin construction of its first submarine; however, the promised funds were not given until 1925. Despite the appropriations, the construction was halted again due to naval armament negotiations occurring in Geneva between 1926 and 1927. By August 1927, it became apparent that an agreement would not be reached. Therefore, on August 2, 1927, two days before the Geneva conference ended, the keel was laid for USS *Nautilus*.

Nautilus was a giant among American submarines of the day; it was 317 feet long with an underwater displacement of 3,960 tons, although the London Naval Conference later limited the size of submarines. *Nautilus* launched on March 15, 1930, becoming the first of what would be many of submarines Mare Island would construct. By 1936, Mare Island was building another submarine, *Pompano*, and another, *Sturgeon*, was on order. One year later, yet another submarine, *Swordfish*, was placed on order for Mare Island, and by 1938, *Sturgeon* launched. The same year, Mare Island received appropriations worth \$12 million to build the submarine tender *Fulton*. Arrangements were also made by the Department of the Navy for Mare Island to build at least one submarine every year, and a submarine tender every other year. When February 1941 arrived, Mare Island was pumping out submarines: five were scheduled to be laid, and three entered the water for the first time to begin sea trials. Ten months later, America's world would change, and so would Mare Island's.

24 In the interim, the city hosted a visit by the Great White Fleet, an attraction viewed by thousands. The May 7, 1908, *New York Herald* reported on the enthusiastic welcome, claiming that "under the weight of the crowd . . . the entire continent seemed to tip westward."

Pampanito

Built at Portsmouth, New Hampshire, in 1943, USS Pampanito (SS-383) is a 312-foot-long Balao-class submarine with an extensive record of public service. At the time of her launching, she represented the cutting edge of submarine technology with greater diving capacity, a robust armamentarium, and sophisticated electronic equipment. These tools were a distinct advantage to the crew of eighty submariners manning the vessel.

Pampanito completed six patrols during the World War II, seeing action in a number of theatres in the Pacific and earning a half-dozen battle stars. Her travels took her from Pearl Harbor to the South China Sea, and from the San Francisco Bay to the Straits of Taiwan. During her career, she sank or damaged six enemy vessels, totaling some 27,000 tons. Among her most notable accomplishments was rescuing over seventy Australian prisoners-of-war victimized by an earlier submarine attack on the former President Harrison, a vessel the Japanese had captured earlier in the war, in an attack that Pampanito itself had helped perpetrate. Decommissioned at the close of hostilities, she was laid up on Mare Island, and thereafter served as a Naval Reserve training ship, before being stricken from the Navy register in 1971.

Pampanito was subsequently transferred to the San Francisco Maritime Museum Association (1976) and turned into a museum and memorial, opening to the public in 1982. Each year, some 100,000 visitors tour the vessel, where they learn the history of this ship and of submarine warfare in general. Volunteers and donors have painstakingly restored Pampanito to her 1945 specifications, creating a realistic experience for her twenty-first-century guests. Among her notable programs is an overnight program for almost fifty youths who experience life aboard a vintage submarine.

In 1986, the vessel was placed on the National Register of Historic Places, at which time she was designated a National Historic Landmark. Currently maintained by the San Francisco Maritime National Park Association, Pampanito is berthed at Pier 45, near Fisherman's Wharf. Today, the vessel serves as both museum ship and memorial to members of the US Submarine Service.

December 7, 1941 began like any other day at the Mare Island Naval Shipyard. However, at precisely twelve minutes past 11:00 a.m., an urgent transmission was received over the fleet broadcast, "Air Raid on Pearl Harbor. This is no drill." Harbor and station defenses were immediately manned, all leaves canceled, all guard posts doubled, a strict censorship of all mail and communication established, and Marines at the yard entrance began stopping and completely searching all vehicles before they even reached the main gate. By the end of the Mare Island's first hour of World War II, the facility was ready for war. And it needed to be: during the week of December 18–24, 1941, Japanese submarines operating in California waters sunk eight American vessels. Coast Guard escort vessels were assigned to fleet protection, but to no avail: on December 20, the tanker *Emidjo* was victimized by enemy fire near the Blunt's Reef Lightship. Worried San Francisco fishermen prayed that a hastily constructed antisubmarine net would protect them inside the Golden Gate, while a network of 361 submerged mines managed by the outpost at Fort Baker created hazards to navigation.²⁵

25 At 7,000 tons, the net stretched for seven miles from the Marin Headlands to the Peninsula.

Mare Island reached its prime during World War II. At the start of the war, the naval yard employed 6,000 men, primarily assigned to shipbuilding and repair duties. At the height of the conflict, over 40,000 civilian and military personnel worked at Mare Island, and the yard became one of the most important facilities servicing the Pacific fleet. In fact, the workforce became so large that base and local housing quickly became exhausted. To address this issue, a bus fleet was created specifically for Mare Island. The fleet quickly became one of the busiest transportation systems in the world, driving an estimated 800,000 miles per month.

The majority of Mare Island's work during the World War II was in retrofitting and repair projects. Many battle-damaged ships from the United States, and even Allied navies, came to Mare Island for repair before returning to service. British cruisers and destroyers were a common sight at Mare Island; the Russians even had four submarines repaired there during the war. Mare Island also provided six American destroyers and cruisers with new bows. By 1944, repair to damaged vessels alone had consumed 4,269,865 days of work.²⁶

USS San Francisco

Among the most notable naval vessels associated with the City by the Bay is the eponymous USS San Francisco. Launched in 1933, San Francisco was among the finest cruisers of her day: at nearly 600 feet long, she achieved speeds of over 30 knots. Heavily armored and with a robust armament, she and her crew of 1,000 were a force to be reckoned with by opposing navies.

Commissioned in Mare Island, the ship played a dramatic role in both foreign policy and military history. During the 1930s, she was flagship of several squadrons that visited Latin America as part of Franklin Roosevelt's Good Neighbor Policy, cruising both the Atlantic and Pacific as part of her prewar operations. Present at Pearl Harbor, she played a minor role in that engagement, emerging relatively unscathed.

While San Francisco was fortunate in avoiding major catastrophe at Pearl Harbor, and where she played a vital if inglorious part in American naval operations in the Pacific in the ten months following that disaster, she endured a much bloodier fate in what is widely considered the pivotal event of the Pacific War, the Battle of Guadalcanal. She suffered heavy damage in that engagement, including devastating attacks from Japanese aircraft and a severe treatment at the hands of several larger Japanese warships. Admiral Daniel Callaghan was among the several dozen crewmembers who lost their lives in the engagement, and the ship itself was only saved thanks to the heroic efforts of those who survived the encounter. The vessel eventually limped to safety and made it back to the Bay Area for extensive repairs, and she was awarded the Presidential Citation Unit for her actions at the Battle of Guadalcanal. San Francisco continued in service throughout the remainder of the conflict, but was decommissioned in 1950. She was sold for scrap in 1959, but a piece of the USS San Francisco remains today.

On November 12, 1950 a memorial was built to commemorate the men who were killed while serving on the San Francisco, and for the ship herself. Located at Land's

26 Among the most notable projects was that associated with the USS *San Francisco*, a heavy cruiser that played a formidable role in the Battle of Guadalcanal. Today, the battle-damaged bridge of that ship forms the basis of a memorial at Lands End in San Francisco, near what was once Fort Miley. See Timothy G. Lynch, "The USS *San Francisco*: Tale of a Ship and the Men who Built and Sailed Her," *The Argonaut: Journal of the San Francisco Historical Society* (Fall 2007): 72–99.

End, the memorial consists of the battle damaged bridge wings, replaced in 1943 at Mare Island, and which are set on a course for Guadalcanal. Currently maintained by the Golden Gate National Recreation Area, the memorial is the site of an annual gathering and remembrance ceremony.

Despite repair work, the facilities at Mare Island continued building ships and submarines. In 1943 alone, Mare Island constructed eighteen destroyer escorts over a period of nine months, equating to over 24,000 tons of shipping. Mare Island also built and/or refurbished 22 submarines during World War II. The submarine force from the yard would go on to make Mare Island proud, sinking a confirmed 252 enemy vessels, or 988,357 tons of shipping. By the end the war, Mare Island built more than 300 landing craft, 33 small craft, 31 destroyer escorts, and 17 submarines. Mare Island was truly a major player in World War II.

In addition to this impressive list of wartime achievements and accomplishments, Mare Island also played host to one of the nation's most compelling wartime dramas. The base served as holding cell for the largest mass mutiny in United States history. On July 17, 1944, 320 servicemen and civilians were killed when an accident at the munitions loading facility of Port Chicago led to a massive explosion.²⁷ The destruction of the SS *Quinault Victory* and the SS *E. A. Bryan* was heard as far away as Sacramento, with the explosion rattling windows in San Francisco. Most of those killed and wounded were African American stevedores, and many of the survivors refused to return to work until conditions improved. Fifty were eventually charged with mutiny, and all were convicted in a racially charged trial.²⁸

After the end of World War II, the resources and personnel assigned to Mare Island began to subside. However, the importance of the Mare Island facility did not diminish. As the United States entered the Cold War, the nation's "silent service" became more important than ever, and, as always, Mare Island was there to keep America's submarine force running.

In the 1960s, the decision was made to build nuclear and retrofit current submarines at Mare Island. USS *Sargo* was the first of seventeen nuclear submarines launched from Mare Island. Mare Island also played an important role in increasing the US nuclear armament by converting fast-attack submarines to ballistic missile class and by keeping existing submarines in service. At the same time, Mare Island also outfitted submarines with special surveillance equipment for spy missions against the Soviet Union.

The Cold War also brought about a new program for personnel assigned to Mare Island: off-site repair services. Mare Island set records impressive by even modern standards. Under this program, repair crews responded extensively throughout the world, supporting a variety of vessels in operational settings. Some examples included repairing a nuclear aircraft carrier in Alameda, servicing ballistic missile submarines in Guam, and even assisting the Egyptian Navy with their diesel submarines. Mare Island was a global player for NATO and the United States abroad.

27 On Port Chicago and the Concord Naval Weapons Station, consult John Keibel, *Behind the Barbed Wire: A History of the Concord Naval Weapons Station* (Columbia, SC: Arcadia Press, 2009).

28 Among the allegations: white officers wagered to see whose crew could load the munitions fastest. See Robert Allan, *The Port Chicago Mutiny: The Story of the Largest Mass Mutiny in United States Naval History* (Berkeley: Heyday Books, 2006).

In addition to Mare Island's traditional support role, the Cold War also brought about a new mission to the naval yard: training boat forces. In 1967, the Naval Inshore Operations Training Command moved from Coronado, California, to Mare Island because of the adjacent Napa-Sonoma Marshes State Wildlife Area. The move was made because the similarities between the operating environment of Vietnam and the wildlife area allowed the Mobile Riverine Force units—designed to search and destroy Vietcong forces throughout the vast swamp waterways of Vietnam—to develop their skill sets in a comparable environment.

It was during this period, too, that the last vessel built at Mare Island was commissioned. In 1970, USS *Drum*, a ballistic missile submarine was launched as part of Mare Island's nuclear submarine program. Although Mare Island continued to service the Pacific fleet for twenty-six more years, *Drum* marked the end of an age at the naval yard.

In 1993, Congress approved the report of the Department of Defense's Base Realignment and Closure Commission. Among the bases to be closed under the plan was Mare Island. At the time of the closure, Mare Island employed more than 9,000 workers. By the time the yard closed in 1996, nearly 1,000 buildings, encompassing over 10.5 million square feet of space, were on property. This included 416 housing units, 20 ship berths, 4 dry docks, 3 finger piers, a medical clinic, a school, 2 fire stations, and 21 other industrial complexes. On-base amenities also improved to include a golf course, athletic fields, swimming pools, tennis courts, and even riding stables. Mare Island had certainly come a long way from its founding in 1854.

Despite the sadness and political controversy surrounding the closure of Mare Island, its history must not be overlooked. For over 126 years, Mare Island served the US Navy and the Bay Area as a premier naval installation and community employer. From its founding to its closing, Mare Island served in the finest traditions of the naval service.²⁹

While the longest-serving shipyard in the Bay Area, Mare Island was not the only one. A comparable facility had been established at Hunter's Point as early as 1867, though at that time it was operated by a commercial entity and not the federal government. With a pair of 1,000-foot graving docks built on solid rock, the facility was operated first by the California Dry Dock Company, which negotiated several contracts with the federal government. For years, it was considered the largest facility in the world, with room to accommodate the biggest warships or passenger steamers. During the interwar period, the Navy contracted with the Bethlehem Shipbuilding Company (which assumed ownership of the facility in 1907 after its own hydraulic yard was destroyed in the previous years' earthquake) for use of the docks, since the facilities at Mare Island were inaccessible to deep-drafted vessels owing to the silting of the Napa River. In 1940, the navy acquired the property outright, converting it into one of the major shipyards on the West Coast and the only such facility between San Diego and Bremerton, Washington. Though the navy operated the yard until 1974, the facility was a major employer in the region until its 1994 closure.³⁰

Moreover, from 1891 the navy used Treasure Island as a training facility (the first of its kind on the West Coast) and maintained a depot at Richmond's Point Molate (in a facility formerly used for wine storage and transport) to ensure an adequate reserve of

29 Sue Lemmon, *Closure: The Final Twenty Years of Mare Island Naval Shipyard* (Vallejo, CA: Silverback Books, 2001).

30 During the intervening two decades, it served as a commercial ship repair facility.

fuel for its vessels. It is clear, then, that the navy has a long and deep relationship with the greater Bay Area.

In addition to these shipyards and sundry other operations, other important manifestations of military presence existed in the greater Bay Area. While the navy was in charge of the ship repair and production facilities, the US Army undertook harbor defense and fortifications. Defensive positions had been present in the area since the time of the Spanish; they became more prominent, however, during the American period of California's history. To fortifications within the Bay at Alcatraz (begun in 1854, they were completed and manned a half decade later, in 1859, and represented the first permanent harbor defense batteries on the West Coast) and at Fort Point were added those on either side of the Golden Gate. In the 1890s, the army began a major modernization of the harbor's coastal fortifications. Fort Mason joined the Presidio (the center for army operations in defense of the western United States) at the southern terminus while Forts Baker, Barry, and Cronkhite were situated on the Marin headlands.

Not surprisingly, the militarization of the Bay Area saw its greatest reach during World War II, which dominated the social, economic, and political landscapes of the mid-twentieth century and set in motion momentous events that still shape the world. The San Francisco waterfront piers played a crucial role in this process. The entire region formed a giant network of defense industries transformed the area into "Fortress San Francisco." The San Francisco Port of Embarkation delivered men and supplies "the length and breadth of the Pacific, serving as a funnel through which all military materiel was passed."³¹ Two-thirds (1.6 million) of all troops headed to the Pacific theatre departed from the Golden Gate on over 800 troopships, including 300,000 ferried from the hastily constructed Fort McDowell on Angel Island. Over 93,000 troops departed in August 1945 alone. Fort Mason, made manifest by the realization that during the Spanish-American War that the Presidio was unfit to handle the demands of the modern military, served as headquarters of the embarkation effort and coordinated the movement of some 23 million tons (or half of all US Army cargo) on over 4,000 freighters. The facility served as the logistical and transport hub for American military operations in the Pacific and controlled a network of shipping facilities that encompassed nearly twenty structures spread over some 210 acres. Materials, military cargo, and embarked troops moved via the State Belt Railroad Line (following the Embarcadero from south of Market to the Presidio) to a network of piers and warehouses at Fort Mason or shipped out of the Oakland Army Terminal.³² Letterman Hospital, on the grounds of the Presidio, quickly became one of the busiest medical centers in the nation, attesting to the grim nature of the work being carried out by the soldiers, sailors, and civilian personnel of the massive military-industrial effort. During the war, virtually the entire stretch of San Francisco waterfront—not to mention countless associated facilities—were commandeered by the federal government under the command of General Homer M.

31 David E. Snow and Erwin N. Thompson, *San Francisco Port of Embarkation, Ft. Mason: Historic Structure Report* (Denver: Pacific Northwest/Western team Branch of Historical Preservation, National Park Service, n.d.), 14.

32 The Belt Railroad was established in 1890 and expanded several times between then and the early 1930s. At its height, it ran from the Presidio to south of China Basin, and boasted eight locomotives. Served by three transcontinental railroad lines, the Oakland Army terminal could accommodate prodigious quantities of cargo. Together with Fort Mason, it employed over 30,000 military and civilian personnel, who handled more than 350,000 freight-car loads during the conflict

Groninger.³³ The facility saw operation through the Korean Conflict and into the 1960s, until its role was supplanted by the facility in Oakland. As in other ways covered by this study, the maritime military uses of the greater San Francisco bay region were impressive.

While the aforementioned uses of California waterways for martial purposes were and are important, there were also more peaceful ways to interpret the maritime milieu. Among the most notable are as inspiration for cultural and artistic works, and as a place of play and recreation. These more lighthearted pursuits are covered in the closing section of this chapter.

Mariners and others have often taken inspiration from the marine environment. For some, it is a muse arousing artistic and cultural expressions, which manifest in painting, poetry, or the visual arts. For others, the waterways are venues for sport and athletic competitions and areas of diverse recreational activities.

California is home to some of the most important marine artists and the setting for major works of maritime literature. Early depictions of maritime life in California include the journal entries of early European explorers, who marveled at the natural beauty of the region, and the gloriously detailed charts and maps created by members of these early expeditions. Travelogues, journals, diaries, and other primary sources reveal much about the seascapes of California and of the peoples who utilized them in a variety of ways. They also reveal a striking degree of condescension, insensitivity, and racism, but remain among the most genuine interpretations that one can find of early indigenous-Euro-American contact. Later accounts, such as those of Richard Henry Dana, depicted the maritime frontier and the daily lives of seamen and other maritime laborers struggling to find their place in an increasingly American setting. *Two Years before the Mast*, in particular, and other documents relative to the gold rush show the impact of acquisitive activities on the region, and a changing paradigm of how the maritime world was perceived.³⁴ Major works of literature centered on California's maritime milieu were penned into the late nineteenth and early twentieth century. Colorful reminiscences by memorable sailors like Fred Klebengat and by talented scribes like Jack London and Robert Louis Stevenson make for rewarding reading that portray the maritime realm with a realistic, if sometimes unromantic, bent.³⁵

While California authors provided a firsthand account of maritime life to landlubbers, marine artists added visual reinforcement to the mental images provided by these wordsmiths. Noted and notable among these were Charles Patterson, John Stobart, Joseph Lee, Gideon Jacques Denny, John Bertonccini, Harlan Soeten, and William Coulter, all of whose masterful compositions portrayed the maritime realm with a striking verisimilitude.³⁶ Coulter, a native of Ireland, was especially noted for his treatment of sailing ships in the Bay during the late nineteenth and early twentieth centuries, as was his dramatic depiction of the

33 The most thorough treatment of this time is James W. Hamilton and William J. Boyce, Jr., *Gateway to Victory: The Wartime Story of the San Francisco Army Port of Embarkation* (Stanford, CA: Stanford University Press, 1964).

34 For a good overview of this period in American maritime literature, consult Hester Blum, *The View from the Masthead: Maritime Imagination and Antebellum American Sea Narratives* (Chapel Hill: University of North Carolina Press, 2008).

35 See, for example, London's *Tales of the Fish Patrol*, *Cruise of the Snark*, and *John Barleycorn*.

36 On Patterson, see Robert Lloyd Webb, *Sailor-Painter: The Uncommon Life of Charles Robert Patterson* (Mystic, CT: Flat Hammock Press, 2005). On Stobart, see Adam Koltz, "John Stobart: A Celebration of Pacific Maritime Heritage," *Mains'l Haul: A Journal of Pacific Maritime Heritage* 34, no. 1 (1995): 22–27.

aftermath of San Francisco's 1906 earthquake and fire. Long recognized as the chronicler of San Francisco's waterfront, his career matched the emergence of San Francisco as one of the world's premier centers of maritime activity.³⁷ He portrayed the final days of sail and the rapid proliferation of steam with a consummate view of both ships and harbor, immortalizing a golden era of maritime commerce.³⁸ Bertonccini, known affectionately as "Johnny the Painter," focused on life among the Arctic whalers, and presented a window into a world rarely seen by outsiders. As captain of the whaling bark *Jeanette* and of the APA vessel *Star of Alaska*, he frequently called at San Francisco, and his paintings found a receptive audience and critical acclaim that waned with his death.³⁹ Later works by masters such as Anton Refregier imparted notions of social justice, environmental degradation, racism, and patriotic fervor to the region's maritime history. The collection of twenty-seven murals housed at San Francisco's Rincon Center speaks to these issues and attest to his immense talents.

Supporters of maritime history likewise strove to preserve the rich maritime heritage of the region, while educating the public to its imminent disappearance. Beginning in the 1950s, a group spearheaded by Karl Kortum—who in 1963 became a founding member of the National Maritime Historical Society—began working toward the establishment of a world-class maritime museum, complete with a collection of historic ships unrivaled on the West Coast. Through several decades, the San Francisco Maritime Museum has risen to that challenge and has now grown to become a National Park that hosts millions of visitors each year.⁴⁰ Their message of maritime preservation, interpretation, and presentation has inspired similar organizations throughout the region. Efforts to preserve Victory (*Red Oak*) and Liberty (*Jeremiah O'Brien*) ships, World War II-era submarines (*Pampanito*), aircraft carriers (USS *Hornet*) and battleships (*Iowa*), the presidential yacht *Potomac*, and assorted other craft have awakened in the greater Bay Area populace a deeper awareness of and appreciation for the region's rich maritime history.⁴¹

Karl Kortum

Among the many individuals committed to preserving and perpetuating the maritime history and heritage of San Francisco was Karl Crouch Kortum. Born in San Bernardino and raised on a poultry ranch in Petaluma, Kortum was instrumental in the founding of both the National Maritime Historical Society and what is now the San Francisco Maritime National Historical Park. A Sea Scout in his youth, Kortum often pointed to this as his introduction to ships and sailing.

Kortum's passion for maritime history is traced to his service on board the bark *Kaiulani*, the last American merchant ship to voyage under sail, in 1941. The voyage took

37 The rise of San Francisco to maritime prominence also occurred at the same time as the advent of photography, leaving a rich collection of maritime photographic images that document this processes. On these, consult Wayne Bonnett, *A Pacific Legacy: A Century of Maritime Photography, 1850–1950* (San Francisco: Chronicle Books, 1991).

38 On Coulter, see James V. Coulter, *W. A. Coulter: Marine Artist* (Sausalito: Sausalito Historical Society, 1981).

39 Mary Jo Pugh, "A Seaman's Life in Watercolors," *Sea Letter*, <http://www.nps.gov/safr/local/bert.html>.

40 A comprehensive and accurate history of this museum can be found in Nancy Olmsted, "At the End of Our Streets Are Spars: San Francisco's Maritime Heritage Becomes a National Park." manuscript, Historic Documents Collection 652, Box 24, GMP series, J. Porter Shaw Library, San Francisco Maritime National Historical Park.

41 Steven E. Levingston, *Historic Ships of San Francisco: A Collective History and Guide to the Restored Historic Vessels of the National Maritime Museum* (San Francisco: Chronicle Books, 1984).

Kortum around both Cape Horn and the Cape of Good Hope, instilling a love for “all things maritime.” His service aboard merchant ships during World War II further cemented this love, and with the return of peace, Kortum dedicated himself to preserving America’s maritime heritage. Through tireless work, he campaigned for the creation of a West Coast institution for the research and study of local maritime history to allow for the preservation and interpretation of America’s seafaring heritage. The establishment of the San Francisco Maritime Museum in 1950 realized this ambition, and the subsequent acquisition and restoration of Balclutha paved the way for what would become the premier collection of museum ships on the West Coast.

The San Francisco Maritime National Historical Park contains a diverse set of resources. The major holdings of the park include the buildings and grounds of the Aquatic Park National Historic Landmark (NHL) District, seven major historic vessels (six are NHLs), a collection of museum objects relating to West Coast maritime history, an archive of original documentary material, a library of published materials, and a brick warehouse building, now leased as the Argonaut Hotel, which contains a visitor center. This represents the largest museum collection in the National Park Service.

The J. Porter Shaw Library—the largest maritime research library on the West Coast—contains tens of thousands of volumes and other printed materials, including the world’s largest collection of whaling literature and WWII naval records. The library serves as the research portal to the park’s thousands of rare archives, plans, photographs, ship models, marine artwork, small craft, and maritime artifacts.

While Kortum’s first commitment was to the institution he helped found, he often championed similar causes elsewhere. He was instrumental in working with preservationists to restore historic vessels from Honolulu to Philadelphia, and from Galveston to Great Britain. He was a guiding voice behind the creation of New York’s South Street Seaport as well as the World Ship Trust and the National Maritime Historical Society.

Kortum’s legacy lives on in the biannual award conferred by the Library Friends Group of the San Francisco Maritime National Historical Park for the best work dealing with the maritime history of the West Coast of the United States.

While artists, authors, and museum professionals took inspiration from California’s waterways, others were drawn to that environment by a desire to challenge themselves, others, and nature itself. Sailing and rowing clubs sprang up at various locations around the greater Bay Area, with seasonal competitions among local yacht clubs. As early as the 1850s and 1860s, match racing was carried out by sloops brought to California aboard East Coast square-riggers, with commercial vessels regularly engaging in popular Master Mariner races. San Francisco Bay provided the roughest and most dramatic sailing in the country, and locals who earned their money by working on the Bay wanted to show off their abilities. Impromptu regattas pitted crews from anchored grain ships against those from scow schooners, while more formal Independence Day competitions saw representatives from such entities as the San Francisco Yacht Club (founded in 1869, it held its inaugural regatta that summer), Corinthian Yacht Club (based in Tiburon and founded in 1886), and Vallejo Yacht Club (1900) entertain competitors from around the world. Big-boat ocean races pitted sailors against one another along the California Coast and beyond, while smaller regattas enjoyed popularity inside the Golden Gate. Notable

local yacht builders included Sausalito's Myron Spaulding, an iconic sailor who frequently competed in prestigious international competitions.⁴² Prominent local builders such as the Stone, Nunes, and Stephens families (along with Spaulding and Matthew Turner, who designed and built a number of champion yacht for his fellow San Francisco Yacht Club members) developed a series of distinctive local classes, including Birds, Bears, Pelicans, and Golden Gates as San Francisco sailors became known the world over. While the innovations were important, other sailors continued to prefer models—particularly the center-board sloop, favored in the waters of San Francisco Bay—long after others elsewhere had abandoned them. The use of fiberglass in competitive yacht racing—an innovation largely tied to Spaulding—allowed that impresario to rival the Herreshoffs of Rhode Island as among the most important sailing innovators ever, and the development of the ultra-light (attributed to Santa Cruz engineers) model revolutionized yacht design worldwide. The 2012 America's Cup competition reflects the status that the greater San Francisco Bay Area has in the international yachting community.

Rowing was a major sport in the late nineteenth and early twentieth centuries—tracing its origin to Whitehall boatmen—and gained a wide following due to the prominence of national champions such as Henry Peterson. They spawned a number of rowing clubs whose members can still be seen racing their sculls near Aquatic Park, or along waterways that are alternatively choked with recreational boaters, intrepid swimmers, and day-tripping fishermen.

The development of Aquatic Park is itself a tale worth telling. Once known as Black Point Cove, the region saw myriad uses since its first development in the years following the gold rush. Home to a smelter, woolen mill, and sundry other tenants, it was a microcosm of the San Francisco waterfront writ large. Diverse industrial activity and an ambitious bay-filling project left the waters polluted with raw sewage and industrial waste: swimming and other recreational uses were forbidden, often for months at a time. Eventually, after the military displaced the industrial polluters as the primary tenant, conditions improved and the San Francisco Recreation League applied for permission to use the waters for its purposes. Rowing and swimming clubs—such as the South End and Dolphin Clubs—replaced the industries that once called the cove home, as the inevitable and inexorable process of gentrification converted the waters from industrial hotbed to recreational community.⁴³ The largesse of federal dollars made possible by the Works Progress Administration furthered the transformation, as the creation of Aquatic Park attests. In 1939, the Bathhouse opened and after an interlude where the park was used by the military (1941–1948) it became home to a Maritime Museum, opened in 1951. In 1984, Aquatic Park received National Historical Landmark status.⁴⁴

Other individuals saw the sea as a destination in and of itself. Passenger cruise lines became popular with the advent of steam technology: previously, passengers had been a low-cost way to fill out empty staterooms on vessels that had mail contracts or were

42 Carl Nolte, "A Legend on the Sausalito Waterfront: Myron Spaulding—Yacht Designer and Renaissance Man," *Sea Letter* 62 (2002): 8–11.

43 The South End Rowing Club, established in 1873, still occupies the premises.

44 On Aquatic Park, see Bill Pickelhaupt, *San Francisco's Aquatic Park* (San Francisco: Arcadia Publishing, 2005). See also James P. Delgado and Stephen A. Haller, "A Dream of Seven Decades: San Francisco's Aquatic Park," *California History* 64, no. 4 (Fall 1985): 272–82.

engaged in more mundane pursuits. By the end of the American Civil War, cruises were touted for their restorative properties and trumpeted as vacations in and of themselves. In 1912, the port was visited by *Cleveland*, described as “a mighty liner, one of the type that circles the globe with hundreds of tourists.”⁴⁵ The popularity of cruise lines departing from California ports to within the Pacific Basin and to destinations beyond grew phenomenally in the years following World War I.⁴⁶ Both San Francisco and Los Angeles featured multiple lines that delivered passengers to Polynesia, the Mexican Riviera, and other exotic locales. Passenger liners catered to wealthy customers seeking a genteel experience apart from their everyday lives. Increasing costs and the advent of commercial airlines eventually caused the cruise industry to change its strategies: during the 1960s and beyond, cruise-ship companies concentrated on creating a casual environment that provided extensive on-board entertainment. As the emphasis shifted from delivering passengers to a particular destination to the shipboard experience itself (replete with lavish theatrical entertainments) a whole new generation of customers flocked to waterfront piers in search of recreation on the high seas. Even today, massive cruise liners call at San Francisco and other California ports, whisking away pleasure-seekers, honeymooners, and countless others.

It is clear, then, that the myriad recreational uses of California waterways are as important today as at any time in the past, and that the diverse ways in which contemporary Californians enjoy the region’s maritime environment are as complex as ever. Subsequent generations of Californians will undoubtedly continue to use the waterways of their region for purposes as diverse as those outlined over the course of this study.

Since time immemorial, the region we know as California has had a complex and often-contradictory relationship with the sea. Used as commercial highway, trash dump, living space, martial theatre, playground, site of resource acquisition, or inspiration, the waters of California were as important to past generations as they are to current ones. California, in general, and the Bay Area, in particular, are rich in historic districts, sites, buildings, and structures that chronicle the region’s maritime heritage. From foundries to dry docks, from shipbuilding facilities to historic vessels, remnants of the maritime foundations upon which the region was built are readily accessible, though often endangered. With responsible stewardship—made possible through historic preservation efforts such as those outlined here—current residents of California can ensure that these waters and the stories they hold and tell will be available for future generations.

45 Cited in Michael R. Corbett, *Port City: The History and Transformation of the Port of San Francisco, 1848–2010* (San Francisco: San Francisco Architectural Heritage Press, 2011), 96.

46 Roger Cartwright, *Cruise America: A History of the American Cruise Ship* (Charleston, SC: The History Press Ltd., 2010). See also Fred A. Stindt, *Matson’s Century of Ships* (Kelseyville, CA: Stindt Publishers, 1982); and Lynn Blocker Krantz, Nick Krantz, and Mary Thiele Fobian, *To Honolulu in Five Days: Cruising aboard Matson’s S.S. Lurline* (New York: Ten Speed Press, 2001).

Mare Island was the first dry dock on the Pacific coast, and remained in service for nearly 150 years. This image shows vessels alongside the dry dock.



Courtesy San Francisco Maritime National Historical Park., G.H. Livingston Collection.A11.17, 452.14 ps.

Karl Kortum (with glasses), founder of the San Francisco Maritime Museum, with associates Gordon Fountain (center) and Gordon Riene aboard C. A. Thayer in 1957. Fountain had accompanied Admiral Byrd to the South Pole in 1926 aboard Bear. Kortum was instrumental in preserving maritime history world-wide, and his passion for San Francisco's maritime history was matched by few others.



Courtesy San Francisco Maritime National Historical Park, A9.38, 795 n.

Schooner Aggie off Mare Island. Owned, in turn, by yachtsmen E. A. Wiltsee and J. V. Coleman, Aggie lost the 1892 San Francisco Yacht Club regatta by a mere two seconds.



Courtesy San Francisco Maritime National Historical Park,
B7.222g.

San Francisco Bay has long held attraction for recreational sailors and fitness enthusiasts. Here, members of the South End Rowing Club participate in a friendly practice session in Aquatic Park.



Courtesy San Francisco Maritime National Historical Park.
A12.36853 pl.

Members of the Golden Gate Park Lifesaving Station pose with their rescue craft for the photographer.



Courtesy San Francisco Maritime National Historical Park.
A12.23, 053 n.

The horrors of the Port Chicago disaster are evident in this photograph from July 17, 1944. Over 200 men lost their lives in the explosion, registered by seismic gauges as equivalent to a 3.1-magnitude earthquake.



Courtesy Naval Historical Center.

Museum ship Balclutha greets visitors to Hyde Street Pier. Flagship of the San Francisco Maritime National Historical Park, Balclutha is part of an impressive fleet of historic vessels, and representative of the countless objects held by that entity.



Courtesy Paul Judge.

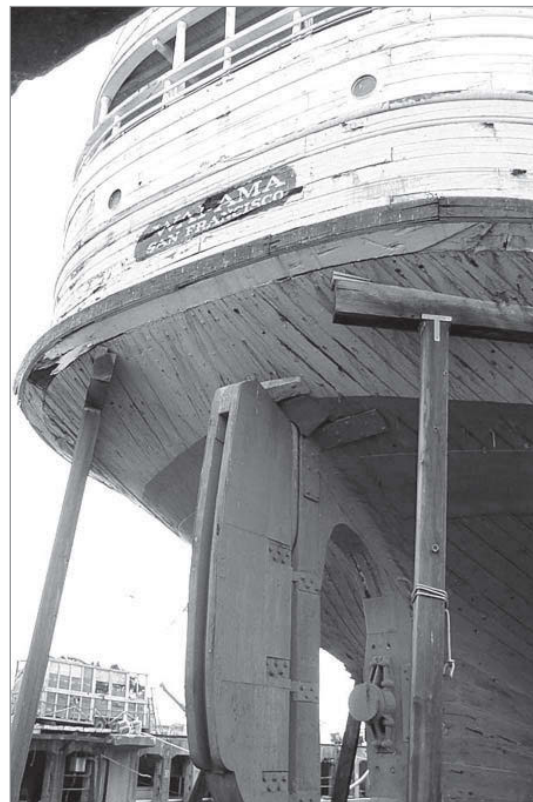
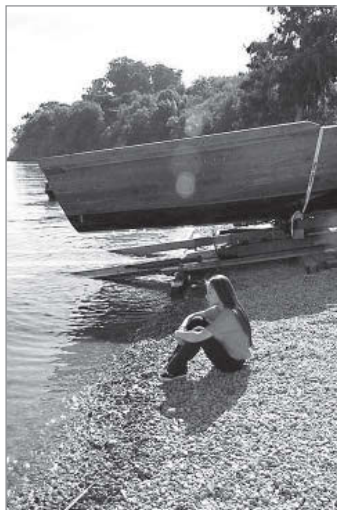
The dramatic painting by Charles Robert Patterson of Great Admiral arriving through the Golden Gate shows the inspiration that artists have taken from San Francisco's maritime milieu.



Courtesy Robert Lloyd Webb, *Sailor-Painter: The Uncommon Life of Charles Robert Patterson* (Flat Hammock Press, 2005).

Two views of historic preservation and promulgation. In the first, the decrepit remains of steam schooner Wapama lie rotting on the grounds of the former Kaiser shipyard in Richmond. The vessel, last remaining example of the steam lumber fleet so important in West Coast maritime history, has been condemned and awaits final disposal. In the second, a young volunteer contemplates her contributions upon the launching of Grace Quan in 2004.

It is through the work of organizations such as the San Francisco Maritime National Historical Park that the first fate is avoided, and the second guaranteed.



Courtesy Paul Judge.

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